TELULAR®

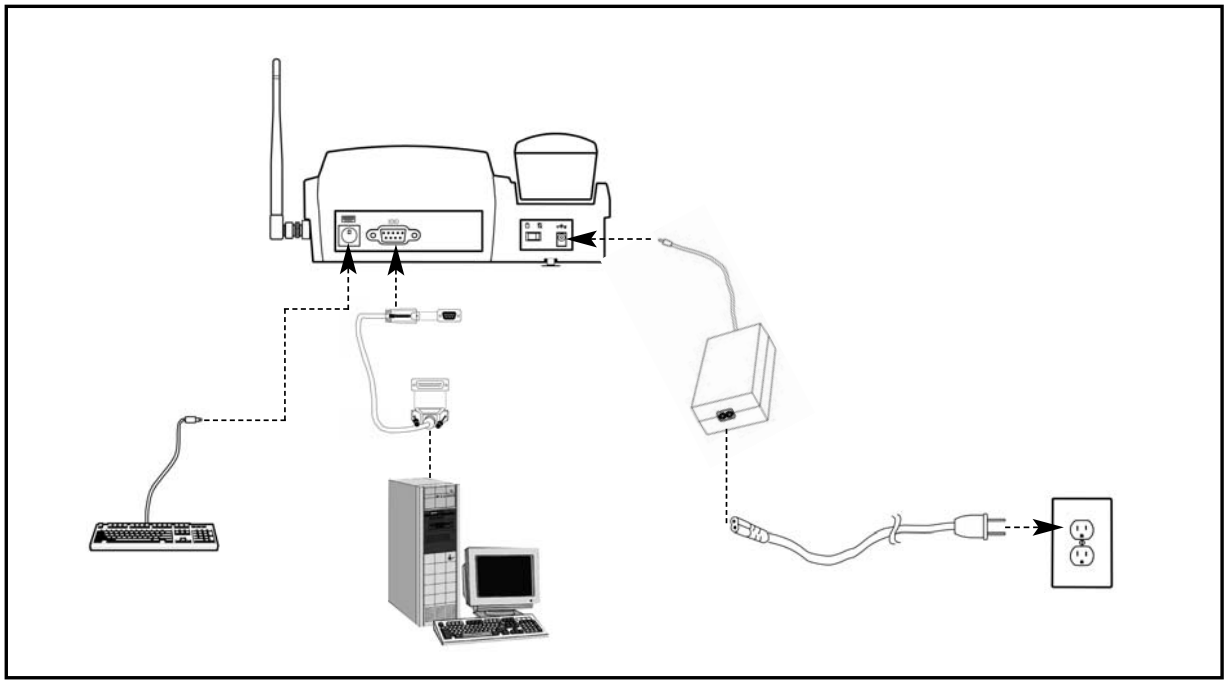
PHONECELL® SX5D GSM

- **Fixed Wireless Phone**
- **Fixed Wireless Fax Phone**
- **Fixed Wireless LCR Phone**

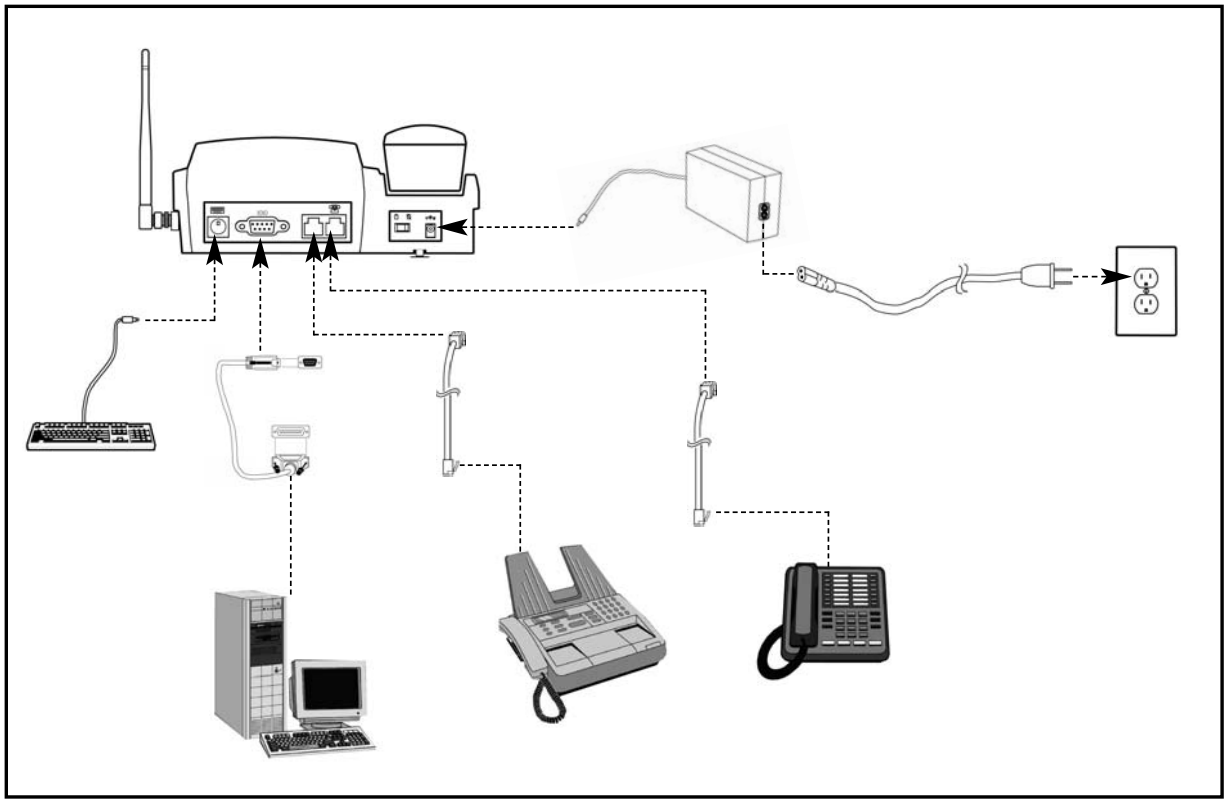
900/1800 MHz GSM
850/1900 MHz GSM

USER MANUAL

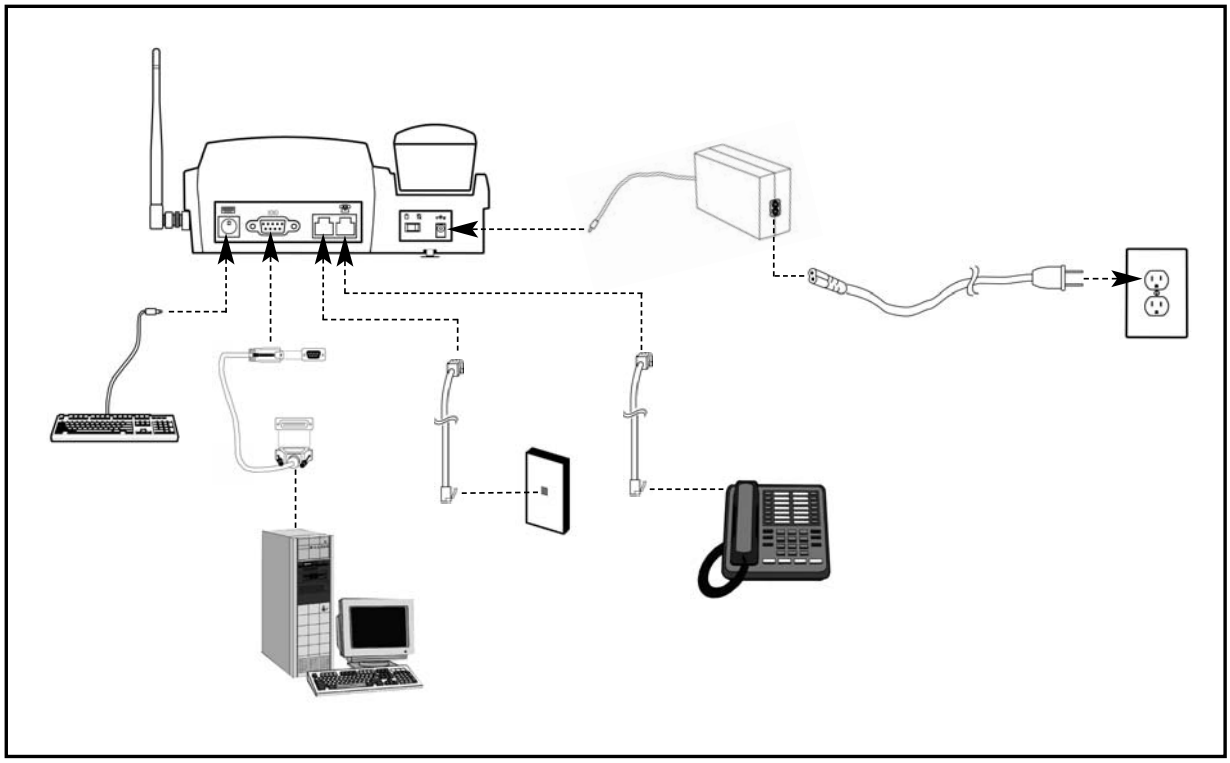
QUICK CONNECTION GUIDE



Fixed Wireless Phone

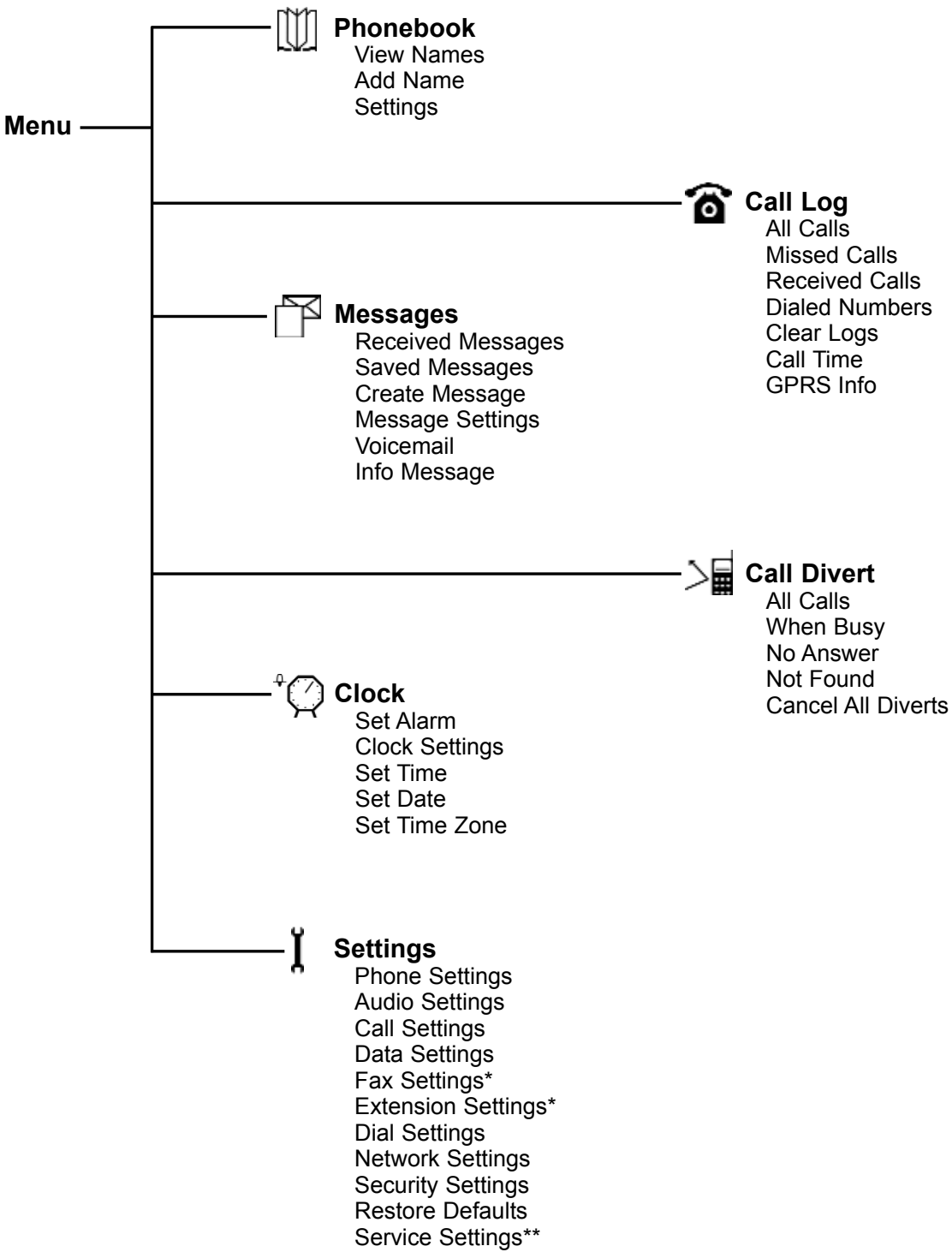


Fixed Wireless FAX Phone



Fixed Wireless Personal Least Cost Routing (LCR) Phone

SX5 MENU STRUCTURE



** Not available on all models*
*** Requires password*

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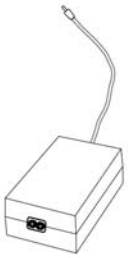
Phonecell® SX5 GSM Desktop Phone

Spike Antenna



Power Supply

AC Power Cord

Before installing your **Phonecell® SX5**, carefully remove the contents from the shipping carton and check for evidence of shipping damage. **If damage is found, contact your Authorized Telular Distributor or shipping agent immediately**.

SAFE OPERATION INSTRUCTIONS

IMPORTANT! Before installing or operating this product, read the ***SAFETY INFORMATION*** section of this manual.

- Install unit indoors.
- Install unit on hard, flat surface for proper ventilation.
- Do not expose unit to rain or moisture.
- Do not place unit on or close to sources of heat

PLEASE SEE THE IMPORTANT NOTICES SECTION OF THIS MANUAL FOR IMPORTANT INFORMATION ON USE, WARRANTY AND INDEMNIFICATION

IMPORTANT NOTICES

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SX5 SETUP

SIM Card Installation

The SX5 requires a Subscriber Identification Module (SIM) for normal operation. The service provider supplies the SIM card, which carries the account information needed to operate the SX5D. The SIM compartment is on the back of the SX5.

NOTE: If you don't have a SIM card, contact your network service provider.

1. Remove the power supply if it has already been connected. The power supply must be removed whenever a SIM Card is removed or installed.
2. Remove the SIM compartment cover by removing the screw - ***see Figure 1.***
3. Open the SIM compartment holder.
4. Line up the SIM card with the arrow on the SIM card holder - ***see Figure 2.***
5. Gently insert the SIM card in the slot of the SIM card holder.
6. Close the SIM card holder.

   NOTE: Do not force the SIM card holder shut. Make sure the SIM card is aligned properly with the directional arrow on the holder.
7. Reattach the SIM compartment cover with the screw.

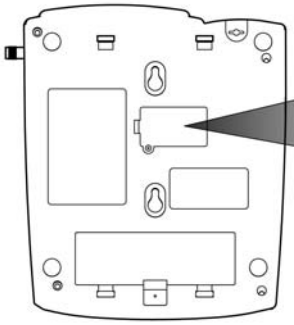


Figure 1 - SIM compartment cover.

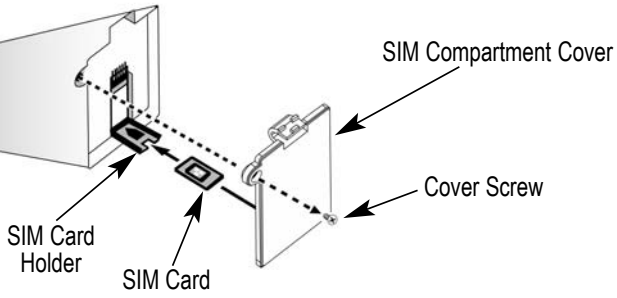


Figure 2 - SIM card installation.

Emergency Batteries

Install Batteries

1. Remove the battery access door screw located on the bottom of the unit - ***see Figure 3.***
2. Press the battery access door tabs and remove the battery access door.
3. Install 4 "AA" alkaline batteries (not supplied).
4. Reinstall the battery access door using the screw - ***see Figure 4.***

WARNING!

Only "AA" alkaline batteries are to be used with the Phonecell® SX5. Use of any other batteries may result in fire and/or other damage to the unit.

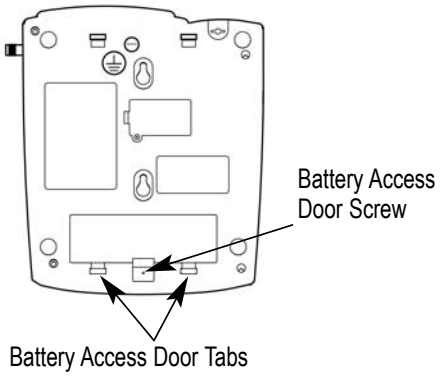


Figure 3 – Battery access door.

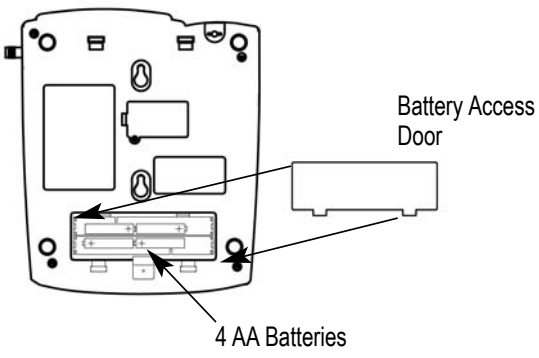


Figure 4 - Battery installation.

Battery Operation

The unit will not automatically switch from AC to battery upon loss of AC power. The AC/Battery switch must be changed manually to the battery position ***- see Figure 5.*** Battery power will provide up to 1 hour of talk time and 48 hours of standby.

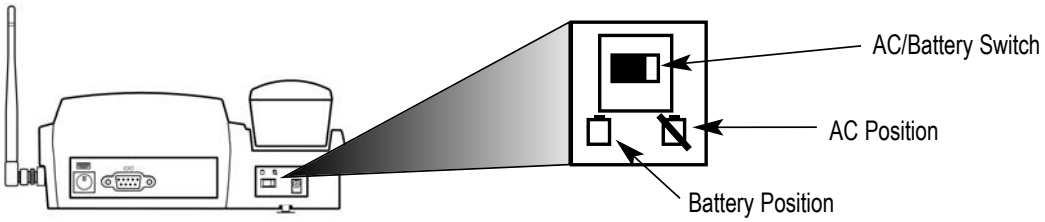


Figure 5 – AC battery Switch.

Location and Setup

The SX5 comes with a standard spike antenna (TNC).

1. Attach and finger-tighten the antenna ***- see Figure 6.*** Do not over-tighten the antenna.
2. Select a location that is above ground and as close to windows (or exterior walls) as possible to get the best signal ***- see Figure 7.***

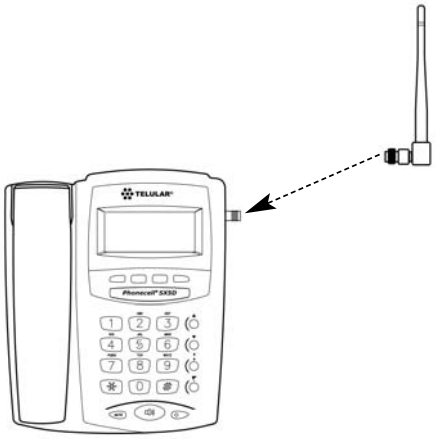


Figure 6 - Attach the antenna.

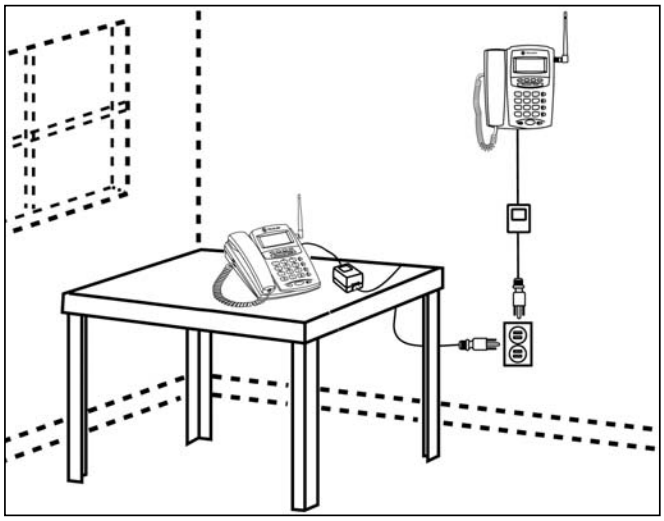


Figure 7 - SX5D location.

Connect the Handset

Before you can use the SX5, you must connect the handset cable.

1. Connect the handset cable to the phone jack ***- see Figure 8.***
2. Connect the handset cable to the handset ***- see Figure 8.***

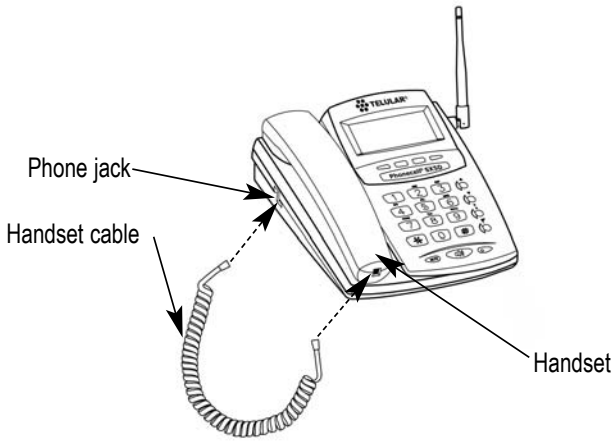


Figure 8 – SX5 handset connection.

Desk-Mounting

A wedge is included with the SX5 to be used to position the SX5 for easier viewing of the LCD screen and keypad. Attaching the wedge is optional. To attach the wedge, use the following instructions.

1. Slide the wedge tabs on the thin end of the wedge into the bottom tab slots on the SX5 ***- see Figure 9***.

NOTE: Holding the wedge at an angle makes it easier to slide the wedge tabs into the bottom tab slots.

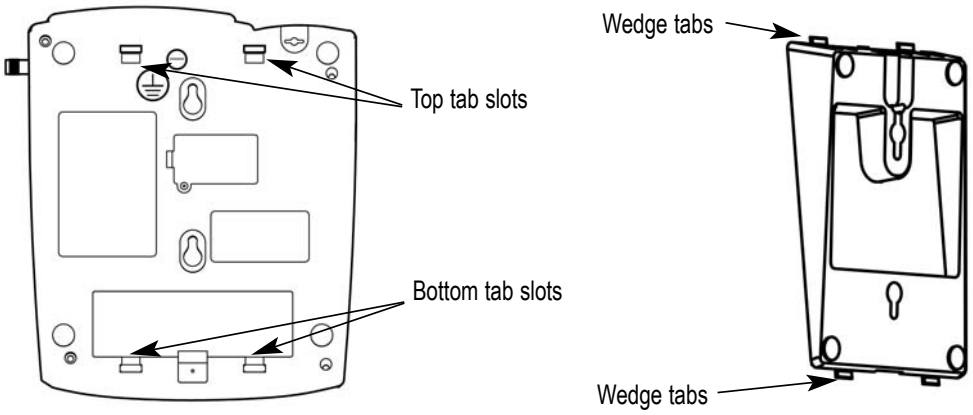


Figure 9 - Tab slots and wedge tabs.

2. Snap the wedge tabs on the thick end of the wedge into the top tab slots **- see Figure 10**.

NOTE: The wedge will fit snugly, so it may be necessary to press the thick end of the wedge towards the bottom tab slots (if the wedge tabs at the thin end have been inserted) in order to snap it into the top tab slots.

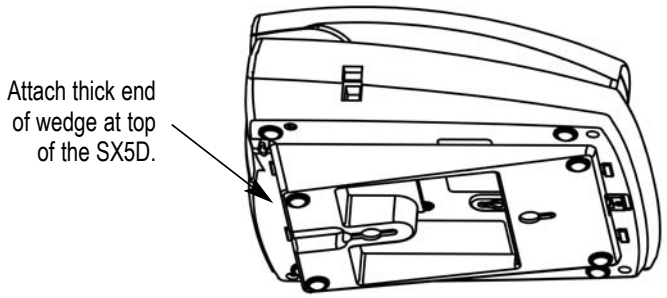


Figure 10 - Wedge attached for desk-mounting.

Wall-Mounting

1. Remove the mounting clip from the cradle and re-insert it with the tab pointing up - ***see Figures 11 and 12.***

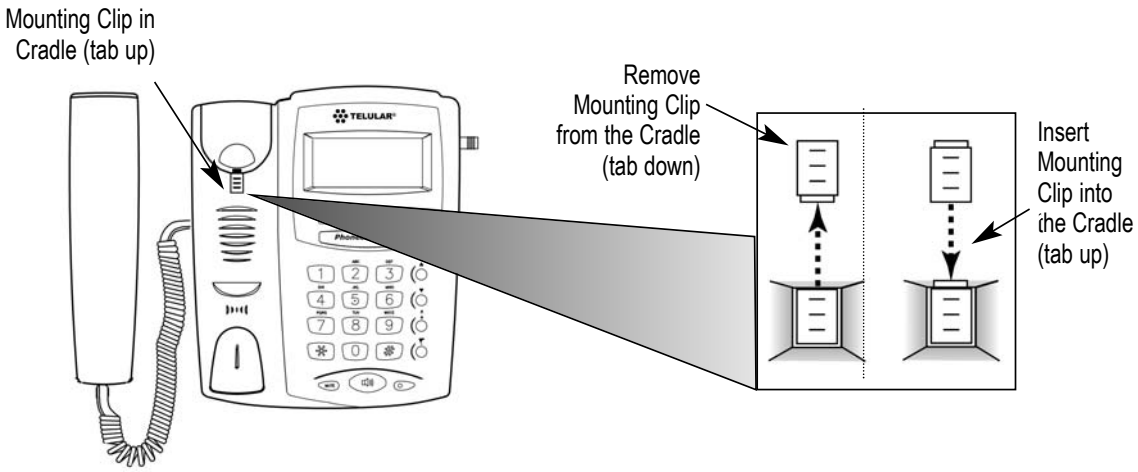


Figure 11 – Handset mounting clip assembly.

Figure 12 – Handset mounting clip for wall-mount.

2. Slide the wedge tabs on the thin end of the wedge into the bottom tab slots on the SX5 ***- see Figure 13***.

   NOTE: Holding the wedge at an angle makes it easier to slide the wedge tabs into the bottom tab slots.

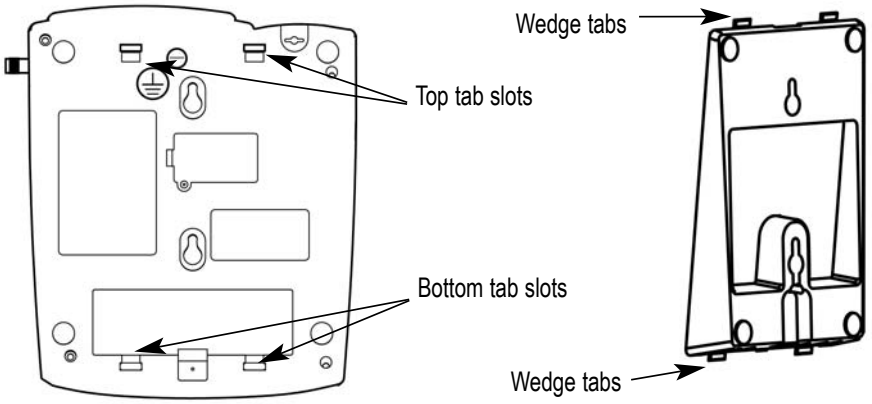


Figure 13 - Tab slots and wedge tabs.

3. Snap the wedge tabs on the thick end of the wedge into the top tab slots ***- see Figure 14***. The wedge will fit snugly, so it may be necessary to press the thick end of the wedge towards the bottom tab slots (if the wedge tabs at the thin end have been inserted) in order to snap it into the top tab slots.

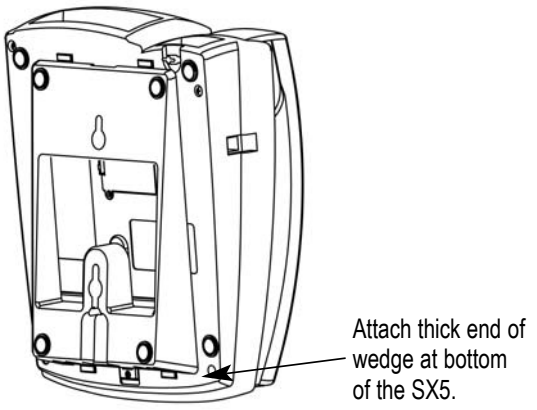


Figure 14 - Wedge attached for wall-mounting.

4. Mark two hole locations 83 mm (3-1/4 inches) vertically apart and drill two holes into the wall.
5. Install the screws (not supplied) into the wall, leaving a gap of approximately 3 mm (1/8 inches) between the screw head and the wall.
6. Align the mounting holes with the screws and mount the SX5 onto the screws - ***see Figures 15 and 16***.

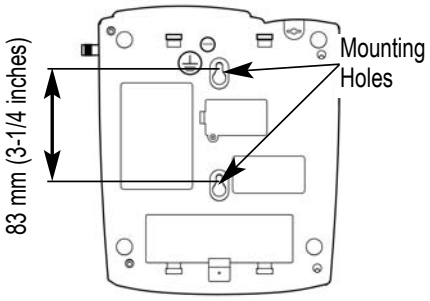


Figure 15 – SX5 mounting hooks.

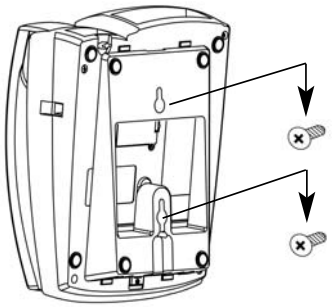


Figure 16 – Mount the SX5 onto the screws.

Connect the SX5 to AC Power

1. A protective earth (safety ground) terminal screw marked with a protective earth symbol is provided on the back of the SX5 - ***see Figure 17***. Connect this terminal to a good earth ground (i.e., a cold water pipe) by means of an 18 gauge or heavier insulated wire. The wire insulation should be green with a yellow stripe to indicate that this is a protective earth (safety ground) connection.
2. Connect the barrel connector of the power supply to the AC power input on the rear panel of the SX5 ***- see Figure 17***.
3. Plug the AC power cord into the power supply.
4. Turn the AC/Battery switch to the AC position.
5. Plug the AC power cord into the wall socket. The SX5 will power up automatically.
6. Check the cellular signal strength and move the unit until the best signal possible is achieved - see the *Service Indication* section of this manual.

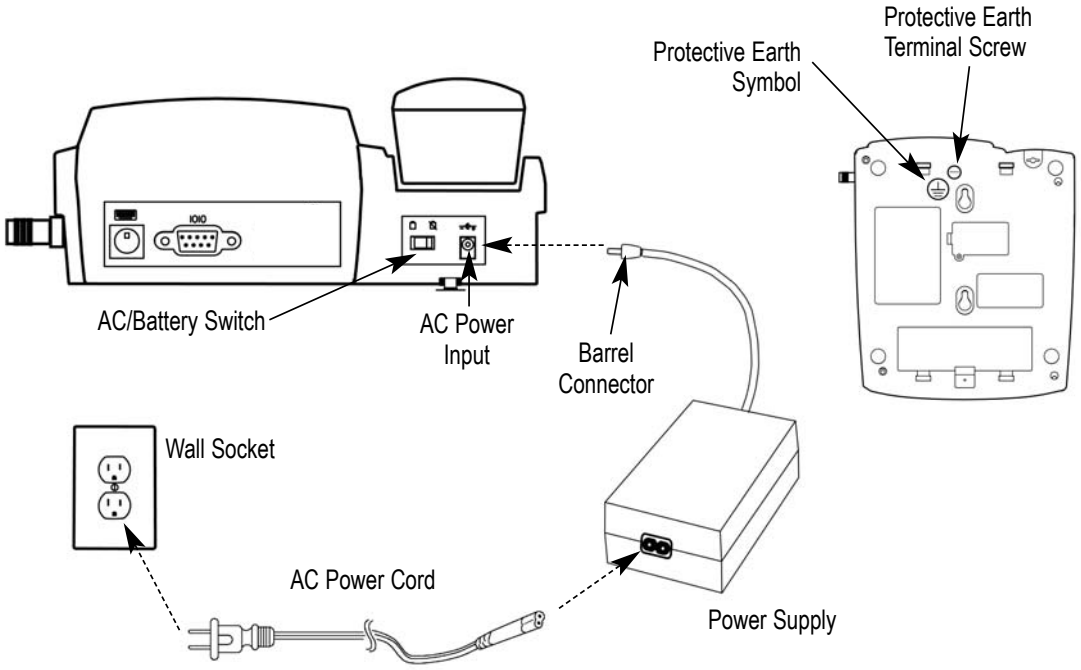


Figure 17 – SX5 AC power connection.

GETTING TO KNOW YOUR SX5D

Function Keys

Operation of the SX5 is accomplished through the function keys on the keypad of the unit ***- see Figure 18***.

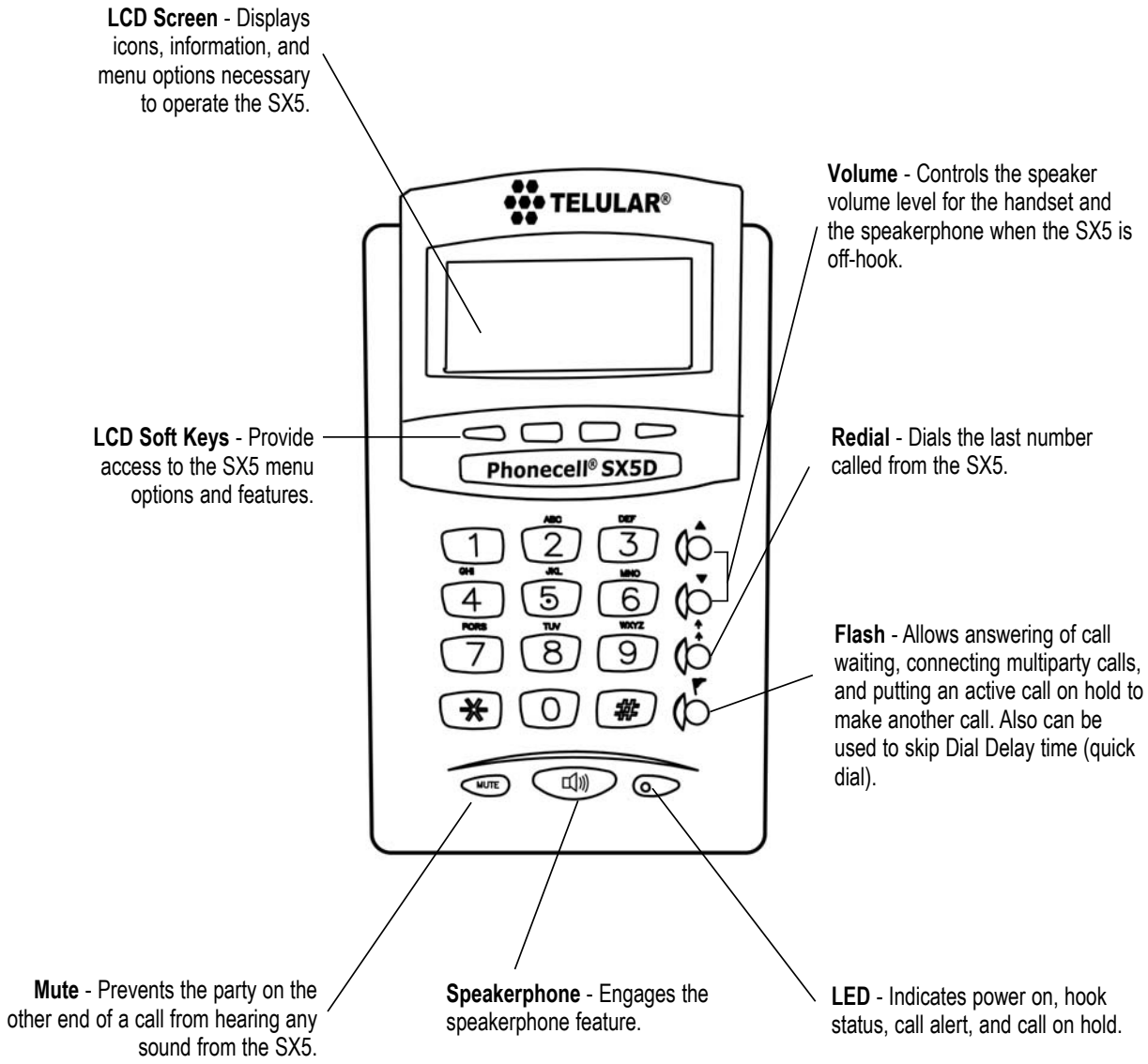

LCD Screen - Displays icons, information, and menu options necessary to operate the SX5.
Volume - Controls the speaker volume level for the handset and the speakerphone when the SX5 is off-hook.
LCD Soft Keys - Provide access to the SX5 menu options and features.
Redial - Dials the last number called from the SX5.
Flash - Allows answering of call waiting, connecting multiparty calls, and putting an active call on hold to make another call. Also can be used to skip Dial Delay time (quick dial).
Mute - Prevents the party on the other end of a call from hearing any sound from the SX5.
Speakerphone - Engages the speakerphone feature.
LED - Indicates power on, hook status, call alert, and call on hold.
TELULAR®
Phonecell® SX5D
MUTE

Figure 18 – SX5 keypad and function keys.

LCD Screen Icons

Icons displayed on the LCD screen indicate the features in use, the status of the phone, signal strength and battery status ***- see Figure 19***.

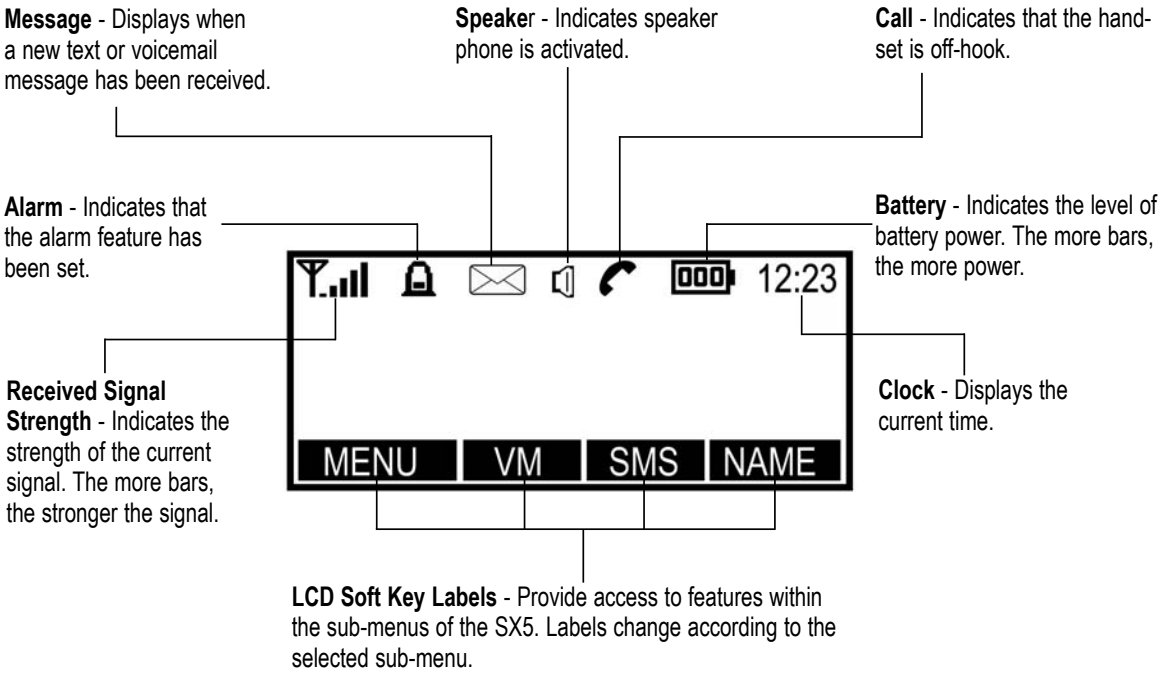

Message - Displays when a new text or voicemail message has been received.
Speaker - Indicates speaker phone is activated.
Call - Indicates that the handset is off-hook.
Alarm - Indicates that the alarm feature has been set.
Battery - Indicates the level of battery power. The more bars, the more power.
12:23
Received Signal Strength - Indicates the strength of the current signal. The more bars, the stronger the signal.
Clock - Displays the current time.
MENU
VM
SMS
NAME
LCD Soft Key Labels - Provide access to features within the sub-menus of the SX5. Labels change according to the selected sub-menu.

Figure 19 – SX5D LCD screen icons.

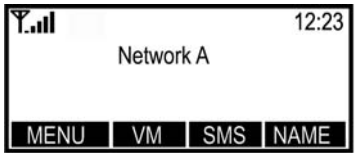
Hearing Aid Compatibility

The SX5 model family has been tested to comply with part 68.316 of the FCC rules and regulations defining Hearing Aid Compatibility (HAC) and thus can be used with hearing aids.

Service Indication

Full Service

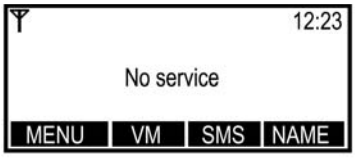
When powered on, the SX5 will display the Telular logo and the LED will light up. After a few seconds, the greeting and mobile carrier will display. If service is available, the antenna icon will display indicator bars. The number and height of the indicator bars increases as the signal grows stronger (the more bars, the better the signal).



Full Service.

No Service

When no service is available, the antenna icon will not display indicator lines. Contact your service provider to verify cellular service is activated. No calls can be made in this condition.



No Service.

Limited Service

If there is a signal, but full service with the system is blocked, only emergency calls will be allowed. Contact your service provider for more information.

Network Registration

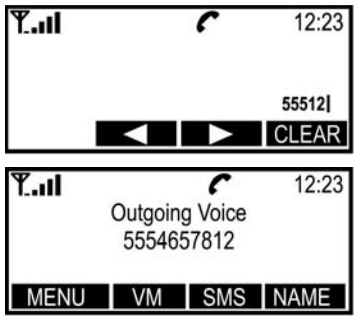
If the home network is unavailable, but there is another network available (either another frequency or system), the SX5 will attempt to register to that system. If there is more than one system, a list of available systems will display.

1. Use the arrow keys to highlight a network from the list.
2. Press the **SELECT** key. If the selected network cannot be accessed, the list of available networks will be updated and a different network must be selected.

CALL FUNCTIONS

Making Calls

1. Pick up the handset or press the **SPEAKERPHONE** key. The SX5 is now “off-hook.”
2. Listen for dial tone.
3. Dial the phone number. The dialed number will be displayed. The name will also be displayed if it is stored in the phonebook.



Making Calls.

Correct Dialing Errors

- To erase one digit, press the **CLEAR** key once.
- To erase all digits, press and hold down the **CLEAR** key until all digits are erased.
- To insert numbers, use the arrow keys.

Redial the Last Telephone Number Dialed

1. Pick up the handset or press the **SPEAKERPHONE** key. The SX5 is now “off-hook.”
2. Press the **REDIAL** key.

Receiving Calls

When there is an incoming call, the SX5 rings, an incoming call notification displays the call type and Caller ID information (if available), and the LED blinks.

1. Pick up the handset or press the **SPEAKERPHONE** key.
2. Begin talking.

NOTE: Press the **REJECT** key to refuse the call. The phone will stop ringing and the calling party will be disconnected.

Receive a Call When Caller ID is Activated

The Caller ID feature displays the caller’s number when the SX5 rings. If the caller’s name and number are stored together in the SX5 phonebook, the caller’s name and number will be displayed. Contact your service provider to activate this feature.

Receive a Call When Caller ID is Activated.

NOTE: If there are missed calls (calls not answered), “MISSED CALLS” will be displayed with the number of calls missed. See the *Call Logs* section of this manual for more information.

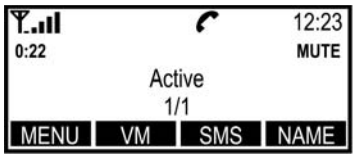
Ending Calls

Hang up the phone by either placing the handset back onto the SX5 cradle or press the **SPEAKERPHONE** key if using the speakerphone.

In-Call Functions

Mute a Call

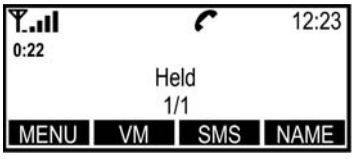
1. While in a call, press the **MUTE** key. A notification will display in the upper right corner of the LCD screen.
2. Press the **MUTE** key again to un-mute the microphone.



Mute a Call.

Place a Call on Hold

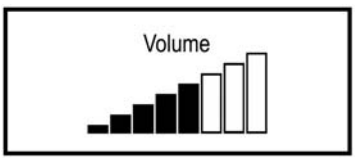
1. While in a call, press the **MENU** key.
2. Select *Hold*. The display will change from Active to Held.
3. To reactivate the call, press the **MENU** key, then select *Retrieve*.



Place a Call on Hold.

Adjust Volume

1. While in a call, press the **Volume** keys to raise or lower the handset/speakerphone volume.



Adjust Volume.

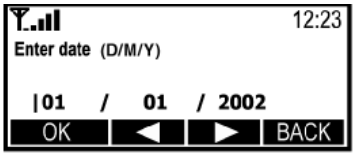
SX5 BASIC FEATURES

Date and Time Settings

The SX5 allows customization of the date, time, time zone, and time format (12 or 24 hour).

Set the Date

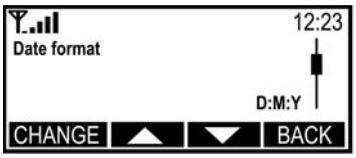
1. Press the **MENU** key.
2. Select *Clock*.
3. Scroll to *Set Date,* then press the **CHANGE** key.
4. Enter the desired date.
5. Press the **OK** key.



Enter date (D/M/Y)

Change the Date Format

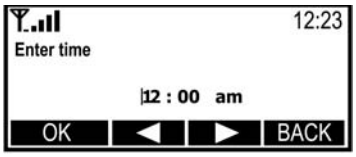
1. Press the **MENU** key.
2. Select *Clock*, then select *Clock Settings*.
3. Scroll to *Date Format*. The current format will display.
4. Press the **CHANGE** key.
5. Select the desired date format.
6. Press the **OK** key.



Change the Date Format.

Set the Time

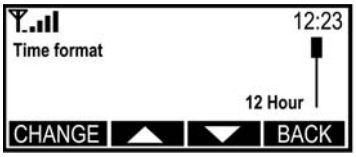
1. Press the **MENU** key.
2. Select *Clock*.
3. Select *Set Time*.
4. Enter the desired time.
5. Press the **OK** key.



Set the Time.

Change the Time Format

1. Press the **MENU** key.
2. Select *Clock*, then select *Clock Settings*.
3. Scroll to *Time Format*. The current format will display.
4. Press the **CHANGE** key.
5. Select the desired time format (12 hour or 24 hour).
6. Press the **OK** key.



Set the Time Format.

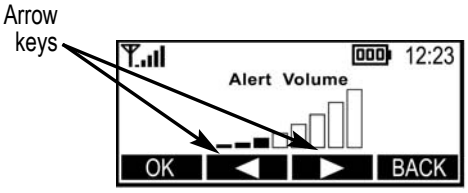
Set the Time Zone

1. Press the **MENU** key.
2. Select *Clock*, then scroll to *Set Time Zone*.
3. Press the **CHANGE** key. Use the two middle soft keys to scroll left or right on the graphic to highlight the time zone you are in.
4. Press the far left soft key to select the highlighted time zone.

Audio Settings

Adjust Alert Volume (Ringer)

1. Press the **MENU** key.
2. Select *Settings*, then select *Audio Settings*.
3. Select *Alert Volume*, then set the desired volume level using the arrow keys.



Adjust Alert Volume.

Adjust Alert Tones (Ringer)

Alert tones can be customized for different types of calls, such as voice or text.

1. Press the **MENU** key.
2. Select *Settings*, then select *Audio Settings*.
3. Use the arrow keys to scroll through the alert types.
4. Select the desired alert sound.

NOTE: If *No Alert* is selected, no alert will sound.

Adjust Alert Tones.

Turn On/Off the Keypad Tones

1. Press the **MENU** key.
2. Select *Settings*, then select *Audio Settings*.
3. Select *Keypad Tones*.
4. Select *On* or *Off*.

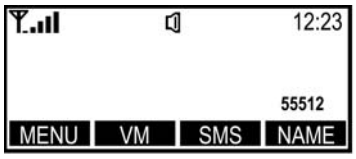
Turn On/Off the Keypad Tones.

Turn On/Off the Warning Tones

1. Press the **MENU** key.
2. Select *Settings*, then select *Audio Settings*.
3. Select *Warning Tones.*
4. Select *On* or *Off*.

Speakerphone

1. Press the **SPEAKERPHONE** key. A dial tone will be heard through the speaker and the Speaker icon will display.
2. Enter a telephone number, press the **REDIAL** key or press the **NAME** key to find a number you have previously entered into the Phonebook - see the *Phonebook* section of this manual for details about how to enter a number.



Speakerphone off-hook.

Speakerphone Microphone Adjustment

You can adjust the microphone gain of the speakerphone from -5 to +5 using *Spkr Phone Adj* in the *Audio Settings* menu.

1. Press the **MENU** key.
2. Select *Settings* then *Audio Settings*.
3. Select *Spkr Phone Adj* then the desired microphone gain using the arrow keys.

Phonebook

The SX5 has an Internal Phonebook capable of storing up to 250 telephone numbers with corresponding names in the SIM card (SIM cards may have different memory capacities) and 18 in the phone memory.

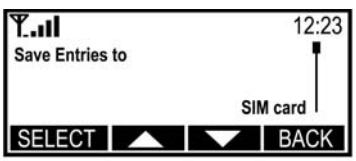
HINT: To dial a number from the Phonebook when off hook, press the **NAME** key, select the name, then press the **DIAL** key.

NOTE: The Phonebook will not be accessible while the SIM Card is read when the SX5 is powered on. This process takes approximately 60 seconds.

Adjust Phonebook Settings

Entries can be saved to the SIM card or to the phone memory. When numbers are saved to the SIM card, they can be transferred by removing the SIM card and installing it in another GSM phone.

1. Press the **MENU** key.
2. Select *Phonebook*, then select *Settings.*
3. Select *Save Entries To*.
4. Select the desired location of the phonebook entries.



Adjust Phonebook Settings.

Keypad Buttons for Text Entry (Multitap)

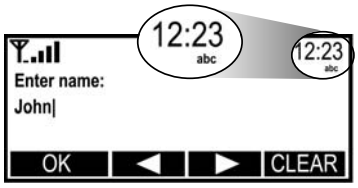
There are three or four letters assigned to each number on the telephone keypad. The letters on the keypad will display when pressed. For example, if the number 3 is pressed, a “D” will appear. If it is pressed twice, the “E” will appear, and if it is pressed three times, the “F” will appear. The cursor will move on to the next space after a brief pause, so the letter must be selected quickly.

Enter a Hard Pause

Hard pauses allow the SX5 to be used with automated phone systems used for pagers or automated banking. When a number is programmed into the phonebook, a pause is entered by pressing and holding “**#**” for more than one second. The hard pause will be displayed as “P.”

Use Lower Case or Numbers

The “*****” key can be used to switch change from upper case (ABC) to lower case (abc) or to numbers (123). The current setting will display under the clock in the upper right corner of the LCD screen.



Use Lower Case or Numbers.

Use Special Characters

The “1” key can access several special characters (punctuation marks and symbols). To scroll through available special characters, press the “1” key repeatedly.

Add a New Entry to the Phonebook

1. Press the **MENU** key.
2. Select *Phonebook*, then select *Add Name*.
3. Enter a name by pressing the alphanumeric keys (maximum 16 characters).

   HINT: Use the “*****” key to switch between upper case, lower case and numbers. Use the “1” key to access special characters. To correct errors in the name, press the **CLEAR** key.
4. Press the **OK** key.
5. Enter the desired telephone number (maximum of 20 digits).
6. Press the **OK** key. You will be prompted to enter another number.
7. Press the **OK** key to save the entry and return to the Phonebook menu. If you have additional numbers (up to 2 more) follow steps 5 through 7 for each number.

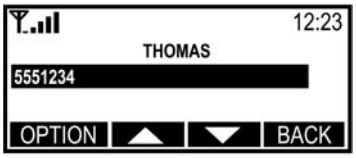
Add a New Entry to the Phonebook.

Phonebook Entry Search

1. Press the **NAME** key.
2. Use the arrow keys to scroll through the entries or use the keypad to view all entries that begin with a specific letter.
3. Press the **SELECT** key to view the phone number(s) listed for a highlighted entry.

Edit or Delete an Entry

1. Press the **NAME** key.
2. Use the arrow keys to scroll through the entries, or use the keypad to view all entries that begin with a specific letter.
3. Press the **SELECT** key to view the phone number(s) listed for an entry that is highlighted.
4. Press the **OPTIONS** key and select the desired option.



Edit or Delete an Entry.

Speed Dialing

Speed dialing permits one-touch dialing for up to 10 telephone numbers stored in the phone book.

Assign a Number to a Speed Dial Location

1. Press the **NAME** key.
2. Select the desired entry to add to the speed dial list.
3. Press the **OPTIONS** key.
4. Select *Add to Speed Dial*.
5. Use the arrow keys to scroll to a location, then press the **SELECT** key.

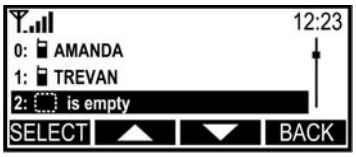
NOTE: If a location is already in use, the phone number that is stored there can be replaced with a new one.

Dial a Speed Dial Location

1. Pick up the handset or press the **SPEAKERPHONE** key.
2. Press and hold the number of the location containing the speed dial number to be called.
3. The number is displayed and dials automatically.

View the Speed Dial List

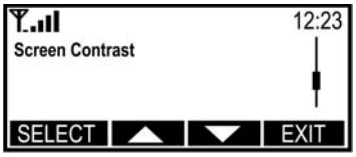
1. Press the **MENU** key.
2. Select *Phonebook*, then select *Settings*.
3. Select *Speed Dial List*.



View the Speed Dial List.

Change the Display Screen Contrast

1. Press the **MENU** key.
2. Select *Settings*, then select *Phone Settings*.
3. Select *Screen Contrast*.
4. Use the arrow keys to adjust the display contrast.
5. Press the **OK** key.



Change the Display Screen Contrast.

SX5 ADDITIONAL FEATURES

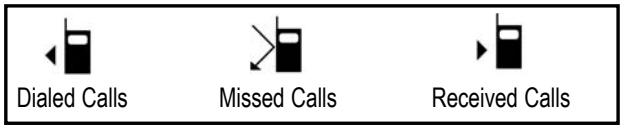
Call Logs

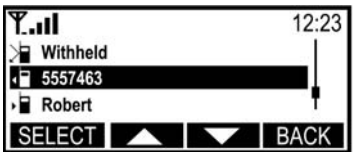
The SX5 stores the telephone numbers of the last ten outgoing calls and the last ten incoming calls with the dates and times of the calls. These numbers are displayed and can be dialed directly from the call log.

View Logs.

View the Call Log

1. Press the **MENU** key.
2. Select *Call Log*.
3. Select the desired calls to view (All, Missed, Received, Dialed). Calls are denoted by the following icons:





View All Calls.

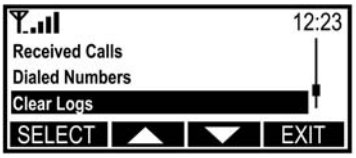
Dial a Number From the Call Log

1. Press the MENU key.
2. Select *Call Log*.
3. Highlight the desired call to dial.
4. Pick up the handset or press the SPEAKERPHONE key.
5. A dial tone will sound, then the number will be dialed.

NOTE: This feature will not work for unavailable or private calls (denoted as *Withheld* in the Log).

Clear the Call Log

1. Press the **MENU** key.
2. Select *Call Log*, then select *Clear Logs.*
3. Select *Yes* to clear the call log. Select *No* to return to the Call Log menu.



Clear the Call Log.

Check the Last Call Time

1. Press the **MENU** key.
2. Select *Call Log*, then select *Call Time.*
3. Select *Last Call Time*.

Check the Last Call Time.

Check Total Accumulated Air Time

1. Press the **MENU** key.
2. Select *Call Log*, then select *Call Time*.
3. Select *All Calls Time*.

Check Total Accumulated Air Time.

GPRS Call Information

1. Press the MENU key.
2. Select Call Logs then GPRS Info.

Alarm Settings

The SX5 alarm feature can be used as an alarm clock. Alarm time and tone can be set for daily use or for one time only.

Set Alarm Time and Tone.

Set Alarm Time and Tone

1. Press the **MENU** key.
2. Select *Clock*, then select *Set Alarm*.
3. Select *Set Time*, then enter the desired alarm time.
4. Press the **OK** key.
5. Select *Set Tone*, then select the desired alarm tone.
6. Press the **OK** key.
5. Press the **OK** key.

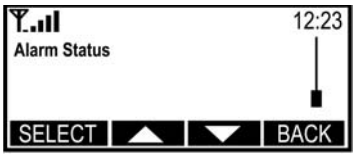
Set Alarm to Repeat Daily

1. Press the **MENU** key.
2. Select *Clock*, then select *Set Alarm*.
3. Select *Repeat Daily*.

Set Alarm to Repeat Daily.

Turn Alarm On/Off

1. Press the **MENU** key.
2. Select *Clock*, then select *Set Alarm*.
3. Select *Alarm Status*.
4. Select *On* or *Off*.
5. Press the **OK** key.



Turn Alarm On/Off.

Language Selection

The SX5 is capable of displaying menu items in several different languages. Options include English, French, Portuguese, Russian and Spanish.

Select a Language

1. Press the left most soft key (**MENU)**.
2. Press ▲ once (displays *Settings* option).
3. Press the left most soft key (**SELECT**) twice (selects *Phone Settings* option.
4. Press ▲ three times (displays *Set Language* option).
5. Press the left most soft key (**SELECT**) once.
6. Highlight the desired language, then press the **SELECT** key.

Select a Language.

Keyboard Setup

SMS text messages can be entered using a standard PC keyboard. The keyboard (not supplied) is connected to the back of the SX5 at the mini-DIN plug. See the **Quick Connection Guide** in the front of this manual for connection information. Once connected only the keyboard language locale needs to be set to match the keyboard being used.

Keyboard Local Setup

The SX5 allows for English, French, Portuguese, Russian and Spanish locales. Each language has sub-locales so the exact keyboard type can be properly matched.

1. Press the **MENU** key.
2. Select *Settings* then *Phone Settings*.
3. Select *Keyboard Locale* then the desired language and locale.

Personalization Options

The SX5 can be customized with a personal greeting that displays when the SX5 is turned on. It can also be programmed to store your phone number for viewing.

Store Your Telephone Number for Viewing

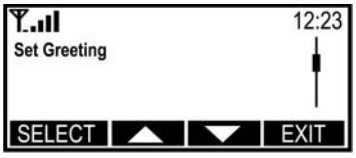
1. Press the **MENU** key.
2. Select *Settings*, then select *Phone Settings*.
3. Select *My Number*.
4. Press the **EDIT** key.
5. Enter your phone number.
6. Press the **OK** key.

Store Your Own Telephone Number for viewing.

NOTE: To display your phone number, follow steps 1-3 above.

Change Greeting Message

1. Press the **MENU** key.
2. Select *Settings*, then select *Phone Settings*.
3. Select *Set Greeting*.



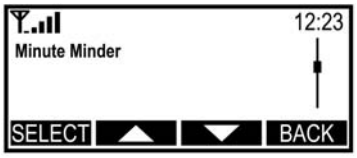
Change Greeting Message.

HINT: Use the "*" key to switch between upper case, lower case and numbers. Use the "1" key to access special characters.

Call Settings

Minute Minder

When turned on, the Minute Minder emits a low audible tone once every minute while a call is active.

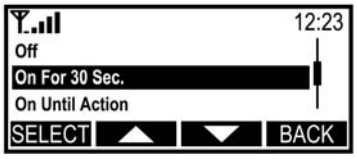


Minute Minder.

1. Press the **MENU** key.
2. Select *Settings*, then select *Call Settings.*
3. Select *Minute Minder*, then select *On* or *Off* as desired.

Call Timer

When turned on, the Call Timer displays during an active call. It can be set to remain visible for 30 seconds after the call is terminated or until another action (key press or taking SX5 off-hook).



Call Timer.

1. Press the **MENU** key.
2. Select *Settings*, then select *Call Settings.*
3. Select *Call Timer*, then select the desired option. Options include:
   - *Off* - no call timer displayed.
   - *On For 30 Sec.* - call timer is displayed for 30 seconds or until user action.
   - *On Until Action* - call timer is displayed until a user action.

PSTN Prefix

Allows setup of a prefix that will be added to every outgoing call.

1. Press the **MENU** key.
2. Select *Settings*, then select *Call Settings*.
3. Select PSTN Prefix.
   - To enable the sending of the prefix for every call, select *On*.
   - To disable the sending of the prefix for every call, select *Off*.
   - To change the prefix that will be sent for every call if enabled, select *Prefix*.

Dial Settings

In-Call DTMF

In-Call DTMF allows the SX5 to access automated telephone systems, such as on-line banking systems, where users must select options by dialing digits.

In-Call DTMF.

1. Press the **MENU** key.
2. Select *Dial Settings*, then select *Dial Settings*.
3. Select *In-Call DTMF*.
4. To enable In-Call DTMF, select *In Band* or *Out of Band*.
   To disable DTMF, select *None*.
5. Press the **OK** key.
   - In Band - allows the DTMF digits to be sent in the voice channel.
   - Out of Band* - allows DTMF digits to be sent as a signal to the network.
   - None - the SX5 will not send DTMF digits to the network.

   ** Recommended method*

Dial Delay

The Dial Delay is the amount of time, after a digit is dialed, the SX5 waits before automatically sending the call.

Dial Delay.

1. Press the **MENU** key.
2. Select *Settings*, then select *Dial Settings*.
3. Select *Dial Delay*.

4. Enter the desired greeting message.
5. Use the arrow keys to change the delay time (2-20 seconds).
6. Press the **OK** key.

Auto Dial.

Auto Dial
The SX5 is able to recognize frequently called numbers and automatically dial them without waiting for the Dial Delay. Once a number has been called twice successfully, it will Auto Dial when this option is turned on.

1. Press the **MENU** key.
2. Select *Settings*, then select *Dial Settings*.
3. Select *Auto Dial*.
4. Select *On* to enable Auto Dial.

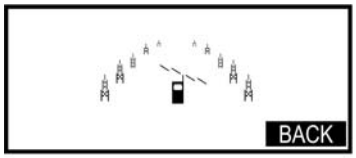
Network Settings

Network settings allow selection of a desired network and addition of a network operator to the network list.

Automatic Selection
This option allows the SX5 to select the network automatically, based on the SIM Card account information.

Manual Selection
This allows you to see a list of networks in your area. Select the desired network from the list and the SX5 will attempt to use that network.

1. Press the **MENU** key.
2. Select *Settings*, then select *Network Settings*.
3. Select *Select Network*.
4. Select either *Automatic* or *Manual*.



Searching for Network.

Set the Preferred Network
This option allows networks to be added to the preferred list of networks. Networks on this list will be selected first when the SX5 searches for a network.

NOTE: There may be several networks on the list.

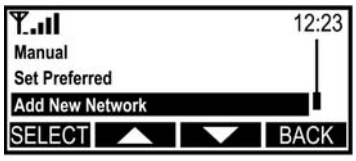
Insert New Entry
1. Press the **MENU** key.
2. Select *Settings*, then select *Network Settings*.
3. Select *Select Network*.
4. Select *Set Preferred*.
5. Highlight the entry above which the new preferred carrier is to be inserted.
6. Press the **SELECT** key.
7. Select *Insert*.
8. Select an entry from the list.

New entry will be inserted here.

Insert New Entry.

Delete Entry
1. Press the **MENU** key.
2. Select *Settings*, then select *Network Settings*.
3. Select *Select Network*.
4. Select *Set Preferred*.
5. Select the desired entry to delete.
6. Select *Delete*.

Delete Entry.



Add New Network.

Add New Network
If a known network is not on the list, it can be added. The Country Code, Network Code, and Network Name must be provided in order to add a network to the list. Once added to the network list, the network can be accessed via the Set Preferred Network option.

1. Press the **MENU** key.
2. Select *Settings*, then select *Network Settings*.
3. Select *Select Network*.
4. Select *Add New Network*.
5. Press the **SELECT** key.
6. Select *Add*.
7. Enter the correct Country Code, Network Code, and Network Name as prompted.

Edit or Delete an Added Network

Network information can be edited or deleted.

1. Press the **MENU** key.
2. Select *Settings*, then select *Network Settings*.
3. Select *Select Network*.
4. Select *Add New Network*.
5. Select the network to be edited or deleted.
6. Select *Change* to edit the network information. Select *Delete* to delete the network from the list.

Change Network Password (Network Dependent)
The network password assigned by your service provider can be changed. However, this option may not be available from all network providers.

1. Press the **MENU** key.
2. Select *Settings*, then select *Network Settings*.
3. Select *Change Network Password.*
4. Change your password per your network provider's instructions.

Turn On/Off SIM PIN1.

SIM PIN Setup

SIM PIN1 controls access to SIM Card information. When SIM PIN1 is on, it must be entered each time the SX5 is turned on. Another user can still access the phone with a different SIM Card. SIM PIN2 accesses network-controlled features.

NOTE: Contact your network provider for information related to SIM PINs.

Turn On/Off SIM PIN1

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *SIM PIN1*.
4. Select *On* or *Off*.

Automatic SIM PIN Entry
When SIM PIN1 is enabled, you must enter PIN1 every time the SX5 is powered on. To by-pass this entry but keep the PIN active, simply enable **Auto PIN Entry**. This allows the SX5 to remember the correct PIN the first time entered. The PIN will then be automatically entered at any future power on. This allows a measure of security where the SIM cannot be used in another device without knowing the PIN.

1. Press the **MENU** key.
2. Select *Settings* then *Security Settings*.
3. Select *Auto PIN Entry* then *On* or *Off*.

NOTE: When SIM PIN1 is disabled, this setting has no effect.

Change SIM PIN1
SIM PIN1 must be enabled and a valid PIN must be entered before this menu item will appear.

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *SIM PIN1*.
4. Select *Change PIN*.
5. Enter the old PIN, then press the **OK** key.
6. Enter the new PIN, then press the **OK** key.
7. Enter the new PIN again, then press the **OK** key.

NOTE: The PIN must be between 4 and 8 digits. Press the **CLEAR** key to make changes.

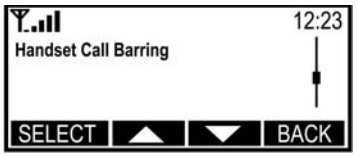
Change SIM PIN2.

Change SIM PIN2

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *SIM PIN2.*
4. Select *Change PIN.*
5. Enter the old PIN, then press the **OK** key.
6. Enter the new PIN. It must be numerical and between 4 and 8 digits long.
7. Press the **OK** key to save the new PIN, or use the **CLEAR** key to make changes.

Handset Call Barring

Use of the SX5 can be restricted by barring certain types of calls from being made or received.



Bar All Incoming Calls, via the SX5 Handset.

Bar All Incoming Calls

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *Handset Call Barring*.
4. Select *Bar Incoming*, then select *On*. Select *Off* to cancel the bar.

Bar All Outgoing Calls, via the Handset.

Bar All Outgoing Calls

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *Handset Call Barring*.
4. Select *Bar Outgoing*, then select *All*. Select *Off* to cancel the bar.

Bar Outgoing Calls to Specific Prefixes (No Prefixes Set)
You can restrict outgoing calls based on prefixes or numbers that are part of a full phone number. For example, to restrict all outgoing calls made with 847 as the first 3 digits, enter 847 as the prefix. A maximum of 11 digits can be entered.

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *Handset Call Barring*.
4. Select *Bar Outgoing*, then select *List*.
5. Since no prefixes have been set, *List Empty* will be displayed. Select **OK,** then select *Add*.
6. Enter the prefix you want barred, then press the **OK** key.
7. You can now *Add*, *Edit*, *Delete*, or *Clear All* prefixes by pressing the **OPTIONS** key.

Bar Outgoing Calls to Specific Prefixes (Prefixes Set)

Bar Outgoing Calls to Specific Prefixes, via the Handset.

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *Handset Call Barring*.
4. Select *Bar Outgoing*, then select *List*.
5. The list of prefixes you have already set will be shown. You can now add a new prefix, edit or delete a selected prefix, or clear all prefixes by pressing **OPTIONS**.

Add Additional Prefixes

1. Press the **OPTIONS** key, then select *Add*.
2. Enter the new prefix, then press the **OK** key.

Edit Current Prefixes

1. Press the **OPTIONS** key, then select *Edit*.
2. Use the arrow and **CLEAR** keys to edit the prefix.
3. Press the **OK** key when finished.

Delete Prefixes

1. Press the **OPTIONS** key, then select *Delete*.
2. Press the **OK** key to delete the prefix.

NOTE: Press the **BACK** key to go back to the previous menu.

Clear All Prefixes

1. Press the **OPTIONS** key, then select *Clear All*.
2. Press the **OK** key to remove all prefixes.

NOTE: Press the **BACK** key to go back to the previous menu.

Restricted Dialing

Outgoing calls can be restricted by creating a Fixed Dialing list that allows only numbers on that list to be dialed from the SX5.

Add to or Edit the Fixed Dialing List.

Add to the Fixed Dialing List

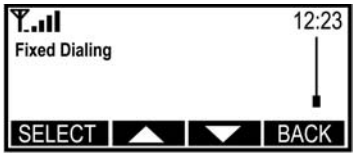
1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *Fixed Dialing.*
4. Select *Edit Dial List.*
5. Enter *SIM PIN 2*, then press the **OK** key.
6. To add a new entry, select *Add*, enter the new number, then press the **OK** key.

Edit the Fixed Dialing List

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *Fixed Dialing.*
4. Select *Edit Dial List.*
5. Enter *SIM PIN 2*, then press the **OK** key.
6. Use the arrow keys to highlight the desired entry to edit.
7. Press the **OPTIONS** key.
8. Select *Edit* to change the entry. Select *Delete* to erase the entry.

Activate Fixed Dialing

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *Fixed Dialing*.
4. Select *On*.
5. Enter *SIM PIN 2*, then press the **OK** key.



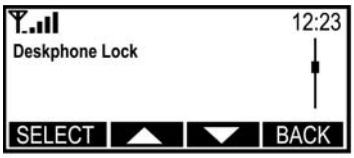
Activate Fixed Dialing.

Deskphone Lock

Access to the SX5 menu options can be restricted by locking the phone. When the deskphone is locked, a PIN is required to make any calls or access any menu items. Incoming calls can still be received. When the SX5 is locked, press the **UNLOCK** key, then enter the PIN to unlock it.

Lock the SX5

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *Deskphone Lock*, then select *On*.
4. Enter the PIN (default pin is 1234).



Lock the SX5.

Change Deskphone Lock PIN

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *Deskphone Lock*, then select Change PIN.
4. Enter the old PIN, then press the **OK** key.
5. Enter the new PIN, then press the **OK** key.

Change the Deskphone Lock PIN.

Closed User Groups (CUG)

This feature depends entirely on your service provider and your account subscription. Contact your service provider for more information.

CUG Settings

1. Press the **MENU** key.
2. Select *Settings* then *Security Settings*.
3. Select *CUG Settings*.

Edit a CUG

1. Press the **MENU** key.
2. Select *Settings* then *Security Settings*.
3. Select *CUG Settings* then select *List CUGs*
4. Press **Edit** to edit the CUGs.

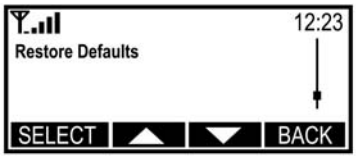
Select a CUG

1. Press the **MENU** key.
2. Select *Settings* then *Security Settings*.
3. Select *CUG Settings* then select *Select*
4. Press **Select** on a highlighted CUG.

Restore Factory Defaults

All system features can be reset to the factory defaults.

1. Press the **MENU** key.
2. Select *Settings*, then select *Restore Defaults*.
3. Select *Yes* to restore all factory default settings.



Restore Factory Defaults.

SUPPLEMENTARY SERVICES (NETWORK DEPENDENT)

In-Call Options

The following options are available during a call. While in a call, press the **MENU** key to access these options. Options display based on call status. For example, Retrieve will only display if a call is on hold or if Call Waiting indicates a second incoming call.

Hold: Puts active call on hold.

Retrieve: Activates a call that is on hold.

Swap: Swaps between held call and active call.

End Current: Ends the current call.

Multiparty: Displays options for managing multiparty calls.

Main Menu: Allows access to the Phonebook, Messages, or Call Log features.

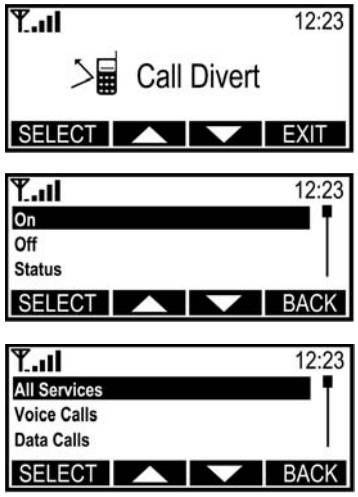
Call Divert (Forwarding)

Call Divert sends incoming calls to another telephone number, even when the SX5D is turned off. Call Divert options include all calls, calls that come in when the line is busy, calls that are not answered after a specified number of seconds, or calls that come in when the SX5D is powered off or has lost the network signal (*Not Found*). Certain types of calls can be diverted, such as voice, data, fax, or text messages. Contact your service provider to activate the Call Divert feature.

Turn On Call Divert

1. Press the **MENU** key.
2. Select *Call Divert*.
3. Select the desired divert type (*All Calls, When Busy, No Answer, Not Found*).
4. Select *On* to divert all types of calls. To specify which types of calls to divert, select *By Service*, highlight the desired service to divert, then press the **SELECT** key.
5. Enter the number to which calls will be diverted, then press the **OK** key.

HINT: Pressing the **OK** key before entering a number will display the Phonebook. Select a number, then press the **OK** key.



Call Divert (Forwarding).

Turn Off Call Divert

1. Press the **MENU** key.
2. Select *Call Divert*.
3. Select the desired divert type (*All Calls, When Busy, No Answer, Not Found*).
4. Select *Off*.

Cancel All Diverts

1. Press the **MENU** key.
2. Select *Call Divert* then *Cancel All Diverts*.

NOTE: When selected, all diverts will be canceled by the network.

Call Waiting

Call Waiting.

Call Waiting enables notification of incoming calls when the SX5 is off-hook (whether during a call or during dialing). To respond to Call Waiting, press the **FLASH** key or the hook switch. Contact your service provider to activate Call Waiting.

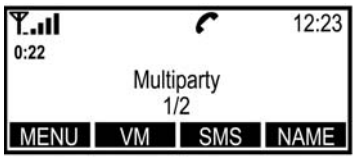
Enable/Disable Call Waiting

1. Press the **MENU** key, then select *Settings*.
2. Select *Call Settings*, then select *Call Waiting*.
3. Select *On* to enable. Select *Off* to disable.

Multiparty Calling

Multiparty Calling allows connection to several calls simultaneously. Contact your service provider to activate Multiparty Calling.

Engage a Multiparty Call



Engage a Multiparty call.

1. While in a call, put the call on hold (via a hookflash, **FLASH** key, or the menu).
2. Dial a second number, then press the **FLASH** key to connect it.
3. When the second call is answered, press the **MENU** key and then select *Multiparty.*
4. Select the desired option.

   Join All: Join the active call with the held multiparty call.
   Hold All: Place multiparty call on hold.
   Next: Display the next call party in a multiparty call.
   Transfer: Connect one call party to another call party and allow the user to leave the call.
   Exclude: Place the selected party of a multiparty call on hold.
   Private: Hold a private call with one party in a multiparty call. Other parties are put on hold.
   I am busy: User defined user busy (UDUB) indicates BUSY to a waiting caller.
   End All: End active and held calls.
   NOTE: Options available depend on the status of the call or calls. For example, if only one other person is in the call, only the End All option will display, or if all the calls have been joined, the Join All option will not display.

Caller ID Settings

Caller ID Settings.

Caller ID settings allow personalization of how caller's information is presented and how your information is presented when you call someone who has caller ID capability. Options include Show caller's ID, show caller's number, hide your ID (hides only your name information), show called ID, hide ID if called.

1. Press the **MENU** key.
2. Select *Settings*, then select *Call Settings*.
3. Select *Caller ID*, then select the desired option.

NOTE: LCR Phone and Fax Phone models include a CO Line Caller ID option under the Caller ID Settings menu. This allows customization of caller ID information displayed on extension phones or caller ID devices connected to the SX5.

Blocking Your Number (CLIR)

To hide your number when calling others enter # 31 # before you dial the phone number. For example, to block your phone number from appearing on 847 555 1212, simply dial # 31 # 847 555 1212. This feature is network dependent. Check with your carrier for more information.

Voicemail

The **VM** key will blink and the envelope icon will display when there are new voicemail messages. Contact your service provider to activate voicemail and for voicemail settings.

Set Voicemail Access Numbers

Typically, your service provider will set the voicemail access numbers for you. If they do not, contact them for the Home Mailbox , Roam Mailbox, Voice, and Message numbers.

Set Voicemail Access Numbers.

1. Press the **MENU** key.
2. Select *Messages*, then select *Voicemail*.
3. Select *Voicemail Settings,* then select *Box Numbers*.
4. Select *Home Mailbox*, then enter the number provided by your service provider.
5. Press the **OK** key.
6. Follow steps 4 and 5 for the Roam Mailbox.

SMS Alert Match

Your network provider may send a text message (SMS) to alert you when you have voicemail. If configured, the SX5 can match this message to let you know that you have voicemail instead of just another text message.

1. Press the **MENU** key, then select *Messages*.
2. Select *Voicemail*, then *Voicemail Settings*, then *Alert Match*.
3. Enter part of the text you receive when the network sends you an SMS message for voicemail. You do not have to enter the whole message just part of the message.
4. When complete, press the **OK** key.

Check Voicemail

1. Press the **VM** key. You will be connected to your voicemail system automatically.
2. Follow the automated instructions.

Short Message Service (SMS)

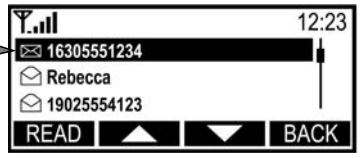
The SX5 is capable of sending and receiving SMS text messages. Each SMS message can have a maximum of 160 characters. Upon receipt of a new SMS message, the message icon (envelope) will be displayed and the **SMS** key will blink. A maximum of 10 messages can be stored. Contact your service provider to activate SMS.

SMS messages can be generated using the SX5 keypad or a standard computer keyboard. See the *Quick Connection Guide* at the front of this manual to see how to connect a keyboard.

Read Received Text Messages

1. Press the **SMS** key.
2. Select *Received Messages*.
3. Scroll to the desired message.
4. Press the **READ** key.

Closed envelope icon



Read Text Messages.

NOTE: Unread messages are denoted by a closed envelope icon.

Reply to Received Messages

1. View the desired message.
2. Press the **OPTIONS** key.
3. Select *Text Reply* to reply with a text message. Select *Voice Reply* to reply with a voicemail.
4. For a text reply, type a reply message, then press the **OK** key. Selecting *Voice Reply* will activate the speakerphone and call the person who sent the message.

Reply to Received Messages.

Forward Text Messages

1. View the desired message.
2. Press the **OPTIONS** key, then select *Forward*.
3. Enter the desired number or press the **NAME** key to select a phonebook entry.
4. Press the **OK** key.
5. To send the message, select *Send Now*. To save the message to send at a later time, select *Send Later*.

Forward Text Messages.

Delete Text Messages

1. View the desired message.
2. Press the **OPTIONS** key.
3. Select *Delete.*

Delete Text Messages.

Create Text Messages

1. Press the **SMS** key.
2. Select *Create Message*.
3. Enter the message text.

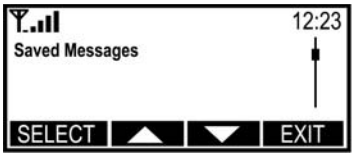
NOTE: Use the "*****" key on the keypad to change the type of text (all capital letters - ABC, lower case letters - abc, or numbers - 123). The current text type is displayed under the clock in the upper right corner of the display screen. Use the "1" key to access special characters.

4. Press the **OK** key.
5. Enter the desired number, or press the **NAME** key to select a phonebook entry.
6. Press the **OK** key.
7. To send the message, select *Send Now*. To save the message to send at a later time, select *Send Later*.

Create Text Messages.

View Saved Messages

1. Press the **SMS** key.
2. Select *Saved Messages*.
3. Select the desired message.



View Saved Messages.

Send Saved Messages

1. Press the **SMS** key.
2. Select *Saved Messages*.
3. View the desired message.
4. Press the **OPTIONS** key.
5. Select *Forward*.
6. Enter the desired number or press the **NAME** key to select a phonebook entry.
7. Press the **OK** key.
8. To send the message, select *Send Now*. To save the message to send at a later time, select *Send Later*.

Send Saved Messages.

Message Settings

Message Center

The message center number is used to retrieve your text messages. Contact your service provider for this number.

1. Press the **SMS** key, then select *Message Settings*.
2. Select *Message Center*, then enter the number that your service provider gave you.

   NOTE: If the number is already entered, press the **OK** key.
3. Press the **OK** key.

Message Lifetime

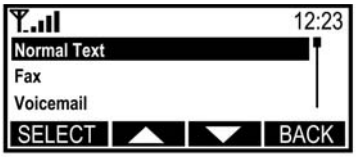
Message lifetime is the amount of time that an unread message will remain on the network server before being removed.

Message Lifetime.

1. Press the **SMS** key.
2. Select *Message Settings*.
3. Select *Message Lifetime*.
4. Select the desired time for unread messages to remain on the network server.
5. Press the **OK** key.

Message Format

This allows messages to be sent in different formats. Contact your service provider for information about which message formats are supported.



Message Format.

1. Press the **SMS** key.
2. Select *Message Settings*.
3. Select *Message Format*.
4. Select the desired message format.
5. Press the **OK** key.

Information Messages

Information messages provide information such as phone numbers for taxi services, car rentals, or emergency services. If your service provider offers information messages, you can select the subjects to view and the language in which to view them. Contact your service provider for more information.

Set Information Subjects

1. Press the **MENU** key.
2. Select *Messages*, then select *Info messages*.
3. Select *Settings*, then select *Subject*.
4. Select *Active*.
5. Press the **SELECT** key.
6. Select *Add*.
7. Select the desired subject from the list.

Set Information Subjects.

Set Languages

1. Press the **MENU** key.
2. Select *Messages*, then select *Info messages*.
3. Select *Settings*, the select *Set Languages.*
4. Select the desired language from the list.

Network Call Barring

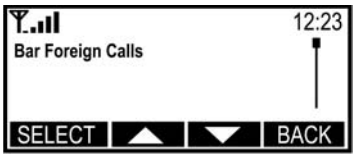
The SX5 supports network call barring of incoming or outgoing calls and allows barring of specific types of services, such as voice or data. Contact your service provider to activate network call barring.

The following call barring options are available**:**

- **Foreign Calls:** Does not allow international calls.
- **Only local and home country:** Only allows local and home country calls.
- **Bar Incoming:** Does not allow any incoming calls.
- **Bar Incoming if Abroad:** Does not allow any incoming calls when the SX5 is outside the home network country.
- **Bar Outgoing:** Does not allow any calls to be made.
- **Bar All:** Does not allow any calls to be made or received.
- **Cancel All:** Deactivates any network call bars that are currently active.

Activate Call Bars

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *Network Call Barring*.
4. Select the desired type of network call bar to activate (see list above for descriptions of each type).
5. Select the desired service to bar.
6. Select *On*.
7. Enter the network password, then press the **OK** key.



Activate Call Bars.

Deactivate Call Bars

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *Network Call Barring*.
4. Select the desired type of network call bar to deactivate.
5. Select the desired service to deactivate.
6. Select *Off*.
7. Enter the network password, then press the **OK** key.

Deactivate Call Bars.

Check Call Bar Status

To see which call bar options are active or inactive:

1. Press the **MENU** key.
2. Select *Settings*, then select *Security Settings*.
3. Select *Network Call Barring*.
4. Select the desired type of network call bar to check.
5. Select the desired service, then select *Status*. The current setting will be displayed.

Check Call Bar Status.

DATA FEATURES

When connected to a personal computer (PC), the SX5 is capable of sending and receiving digital fax and data, sending and receiving email communications, and accessing the Internet. Data speeds may vary depending upon your cellular network.

Connect SX5 to a Computer

Use a data cable to connect the DB-9 data port on the SX5 to the appropriate data port on your PC.

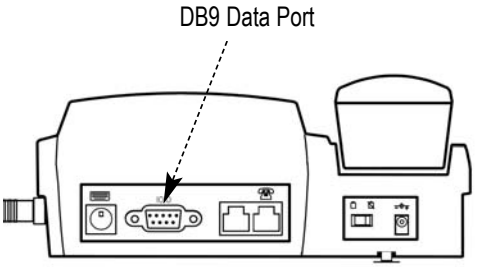


Figure 20 - DB9 Data Port on the SX5

Configure PC for Circuit Switched Data

Requirements

- Active GSM account with your network service provider including a Data/Fax facility
- Windows (version 95/98 or later)
- PC with a Com Port.

NOTE: When all of the above have been satisfied, you may proceed.

Modem Setup

1. Power on your PC/laptop.
2. Access the Control Panel, then select the Modems option.
3. Install a new modem device for the SX5 with the following specifications:

   Modem Type: Standard 19200 bps Modem

   Maximum speed of serial port: 19,200

   Data bits: 8

   Parity: None

   Stop bits: 1

   Use Flow Control: Enable this option and select Hardware [RTS/CTS]

   Extra settings: AT & D1

Automatic Baud Rate Fall Back Control

The SX5 supports an automatic fallback to 19,200 bps when errors are detected in the data stream. This is useful for applications such as PC digital fax because most PC fax applications require a 19,200 bps baud rate on the serial port.

Enabling Fallback

Enable this feature when you have an application that uses a port speed of 19,200 bps. When the SX5 has a port speed that does not match the port speed on the PC, errors will be detected. When these errors are detected, the SX5 will adjust the port speed to 19,200 bps, thus matching the PC application rate of 19,200 bps. It does not matter if the SX5's port speed is higher or lower than 19,200 bps, the SX5 will still adjust the rate to 19,200 bps.

NOTE: The SX5 does not support autobauding and will only adjust the port speed to 19,200 bps under the above conditions. No other rate will be automatically set.

1. Press the **MENU** key.
2. Select *Settings* then *Data Settings*.
3. Select *DTE Fallback* then *On*. (**This is the factory default setting**)

When to Disable Fallback

If you mainly use the SX5 for GPRS data, then **disable** fallback of the port rate. This will allow some errors in the data stream without effecting a change in port speed on the SX5.

1. Press the **MENU** key.
2. Select *Settings* then *Data Settings*.
3. Select *DTE Fallback* then *Off*.

Baud Rate AT Commands

The SX5 will accept AT commands to setup the port speed. If you want to change the SX5 port speed for a session or keep the change permanent, or if you just want to see the profile settings, use the following AT commands from a terminal application (like HyperTerminal).

NOTE: Make sure DTE Fallback is **OFF** before making changes to the baud rate.

View current configuration	AT&V
Change the port speed on the SX5 to <baud rate>	AT+IPR=<baud rate>
Permanently change the SX5 port speed to <baud rate>	AT+IPR=<baud rate>

Digital Fax Setup

The SX5 is capable of receiving and sending faxes via a personal computer using a standard RS232 serial port. The PC application and modem setup must be able to support software flow control. To setup flow control properly, follow the instructions for setting up a standard modem connection in Appendix A of this manual with the following changes.

HINT: Setup a separate modem for PC fax and a separate modem for PC circuit switched data connections. This way you will not have to make changes to the modem settings every time you want to use fax or data.

1. Change the flow control of the standard modem to enable **software flow control**.
2. Change Extra Settings from AT&D1 to **AT+IFC=1,1 &d1**. This enables software flow control on the SX5.
3. On the SX5, select the serial port for your data connections by entering the **MENU**, then select *Settings*, then *Fax Port*, then *Data Port*, and then *Serial Port* (DB9).
4. Run your PC fax application using this new modem connection for receiving and sending faxes.

GPRS (Packet Data) Connections

The SX5 will allow GPRS connectivity if your network service provider has this feature available. GPRS allows packet data connections at higher speeds than conventional circuit switched (dial-up) connections. A GPRS Kit can be used when you are connecting with GPRS service. This kit contains a serial cable and a setup CD for installation on a standard personal computer. Contact your service provider or nearest dealer for more information.

Analog Modem Support

The SX5 FAX phone model supports connectivity with an analog modem. A PC with a modem or other devices that use a modem, like a credit card swipe Point Of Sale (POS) machine, can be connected to the RJ-11 jack (marked with a telephone icon) and used seamlessly.

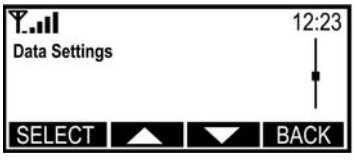
Data Port Setup

The RJ-11 voice jack on the SX5 (the jack marked with a phone icon) can be configured for voice (default setting) or analog modem data. If the jack is configured for analog data, the bypass string for voice calls must be entered before a voice call can be made. In voice mode, data transmissions are routed through the DB-9 port. To send data via an analog modem while in voice mode, use the analog bypass string.

1. Press the **MENU** key.

2. Select *Settings*, then select *Data Settings*.

3. Select *Data Port*, then select *Analog (RJ-11)* or *Serial Port (DB9)*.



Data Port Setup.

Using the Bypass String

A bypass string can be used when the default port is not set to analog data. This string needs to be appended to the beginning of the phone number that the modem is dialing.

1. Go off-hook on the RJ11 analog modem jack (jack with phone icon).

2. Dial the bypass string and number: **# * 19 * 2 # <number>**.

Modulation

The analog modem interface supports the following standards and data rates. The SX5 also sup-

ports automatic modulation adjustment. The default is V.8 (Auto).

NOTE: This modulation is only for the connection between the modem and the SX5.

1. Press the **MENU** key.
2. Select *Settings*, then select *Data Settings*.
3. Select *Modulation* then select the modulation desired.

Connection Element

The SX5 supports both transparent (no error correction) and non-transparent (error correction) data connectivity. Check with your carrier to determine which is right for your application.

Modulation	Baud Rates (bps)
V.32bis	14000, 12000, 9600, 7200
V.32 (TCM)	9600
V.32	9600, 4800
V.22bis	2400, 1200
V.22	2400, 1200, 600

1. Press the **MENU** key.
2. Select *Settings*, then select *Data Settings*.
3. Select *Air Rate*, then select *Connection Element*.
4. Select either *Non-Transparent* or *Transparent*.

Connection Element.

Air Interface Data Rates

When using an analog modem for data, different data rates over the air are possible depending on your carrier. If your not sure what your carrier supports use the default setting Autobauding or ask your carrier.

NOTE: This modulation is only for the air interface connection between the carrier and the SX5.

1. Press the **MENU** key.
2. Select *Settings*, then select *Data Settings*.
3. Select *Air Rate*, then select *Data Rate*.

Modulation	Over the Air Data Rate
V.21	300
V.22	1200
V.23	1200, 75
V.22bis	2400
V.26ter	2400
V.32	9600, 4800
V.34	14,400, 9600
V.110	14,400, 9600, 4800, 2400, 1200, 300

MO Option

Enabling this option (On) will cause Mobile Originated analog data calls, at the local modem (the connection between the SX5 and a connected modem) to delay the start of the connection phase until the remote connection (over the air) is established successfully. When disabled (Off), the local modem and the SX5 will connect immediately independant of the remote modem and you need to delay the connection indication to the local modem connection

1. Press the **MENU** key.
2. Select *Settings*, then select *Data Settings*.
3. Select *MO Option*, then either *On* or *Off*.

TELEPHONE EXTENSION SETUP*

Certain models of the SX5 can support standard telephone extensions. You can connect standard telphones to the jack marked with a telephone icon. The SX5 can support up to a 5REN load.

Connecting Standard Telephones to the SX5

1. Using RJ-11 cable (*not supplied*), connect a standard telephone to the RJ-11 jack on the SX5 that is marked with a telephone icon ***- see Figure 23***.

HINT: When an extension phone goes off-hook, “External dialing...” will display on the SX5D screen.

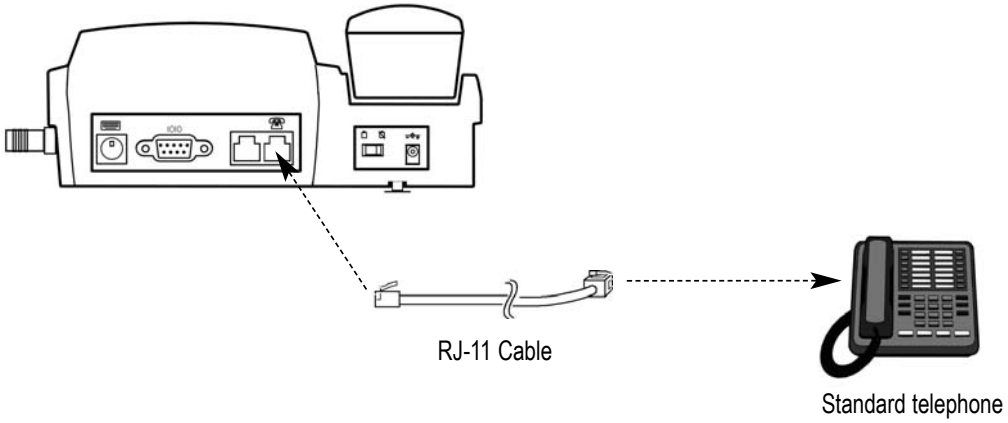


Figure 23 - Connect the **SX5** to additional phones.

Pulse Dialing

The SX5 supports pulse dialing from a standard telephone connected the extension jack, but it is recommended that you use a DTMF (tone) type telephone.

1. Press the **MENU** key.
2. Select *Settings* then *Dial Settings*.
3. Select *Pulse Dialing*. The current setting will be displayed.
4. *On* will enable pulse dialing from an extension phone.

Line Ringing

This setting changes the cadence of an extension phones ringer. Selection include US style, UK style, European style, or off.

1. Press the **MENU** key.
2. Select the *Settings* then *Audio Settings.*
3. Select *Line Ringing*. The current setting will be displayed.

Line Level

This changes the extension phones audio level. If the extension phone(s) connected does not allow for audio volume adjustment, use this feature.

1. Press the **MENU** key.
2. Select *Settings* then *Audio Settings*.
3. Select *Line Level*. The current setting will be displayed.

Extension Caller ID

This allows control of the extension line caller ID format for devices that support caller ID. The selections include MDMF (name and number), SDMF (number only), or off.

1. Press the **MENU** key.
2. Selet *Settings* then *Audio Settings*.
3. Select *Extension Alert*. The current setting will be displayed.

SX5 FIXED WIRELESS LCR PHONE

The SX5 Fixed Wireless LCR (Least Cost Routing) Phone allows calls to be placed through the wireless GSM network or the public switched telephone network (PSTN) ***- see Figure 21***. This capability enables users to take advantage of favorable rates based on type of call (local or long distance), time of call, and receiving party (wireless subscriber or PSTN subscriber).

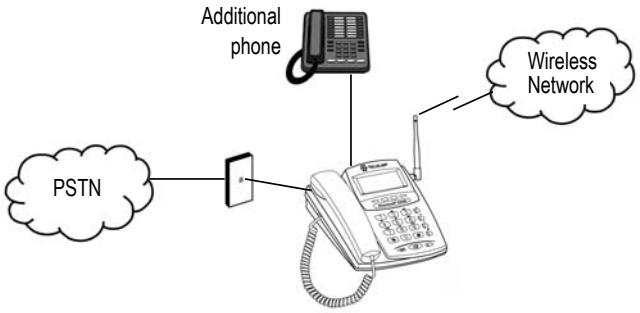


Figure 21 - Personal LCR option.

Connect the SX5 Personal LCR Phone to the Landline (PSTN)

The SX5 Personal LCR Phone must be connected to the PSTN in order to take advantage of least cost routing. Once it is connected, both wireless and PSTN services will be available. Wireless service is the default setting for primary service (what is automatically active when the SX5 goes off-hook). PSTN service can be connected by pressing the **FLASH** key before entering the phone number.

1. Using RJ-11 cable (*not supplied*), connect the PSTN wall jack to the unmarked jack on the SX5 Personal LCR Phone ***- see Figure 22***.

NOTE: Make sure to connect the PSTN to the proper RJ-11 jack on the SX5. Improper connection may damage the SX5.

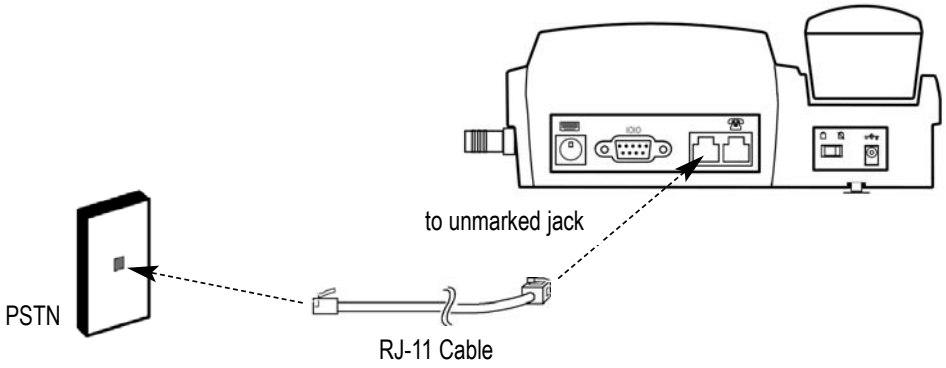


Figure 22 - Connect the **SX5 Personal LCR Phone** to the Landline PSTN.

Change the Default Service

This setting changes which service is automatically active when the SX5 goes off-hook.

Change the Default Service.

1. Press the **MENU** key.
2. Select *Settings*, then select *Extension Settings*.
3. Select *Service Mode*. The current setting will be highlighted.
4. To select the wireless network as the default service, select *GSM*. To select the landline network as the default service, select *PSTN*.

PSTN Alert Setup

The SX5 can use a different alert tune to denote the difference between a landline call and a wireless call.

1. Press the **MENU** key.
2. Select *Settings* then *Audio Settings.*
3. Select *Extension Alert.* The current setting will be displayed.

Make Calls via the Alternate Service

1. Pick up the handset.
2. Press the **FLASH** key. The alternate service will be displayed.
3. Dial the desired number.

Connect Additional Phones to the SX5 Personal LCR Phone

Multiple phones can be connected to the SX5 Personal LCR Phone (up to a 5 REN load can be supported). Any additional phones (extensions) attached to the SX5 will only be able to access the GSM network. No calls can be made or received via the PSTN on the extension phones. See **Telephone Extension Setup** section of this manual for more information.

HINT: When an extension phone goes off-hook, “External dialing...” will display on the SX5 screen.

SX5 FIXED WIRELESS FAX PHONE

The SX5 Fixed Wireless Fax Phone allows connection to a fax machine and additional telephones. The SX5 can be set up to use one or both of its RJ-11 jacks. In Single Jack mode, only the jack designated with a telephone icon is operational. A fax machine or an additional telephone can be connected to that jack. In Dual Jack mode, the unmarked jack is used for fax, and the jack marked with the telephone icon is used for any additional phones.

Fax Timing Adjustments

Phase D adjustments can be made to analog faxing. If you experience faxing issues try adjusting this setting.

1. Press the **MENU** key.
2. Select *Settings* then *Fax Settings.*
3. Select *Bypass Phase D Repeat*.
4. Select *On* and then adjust *Duration* until your analog fax application is successful.

Dual Jack Setup

This feature allows the operation of a fax machine without entering a prefix before sending a fax. The fax machine must be connected to the unmarked RJ-11 jack on the SX5. Any extension phones must be connected to the RJ-11 jack marked with a phone icon ***- see Figure 24***.

1. Press the **MENU** key.
2. Select *Settings*, then select *Fax Settings*.
3. Select *Analog Fax Jack.*
4. Select *Dual Jack*.

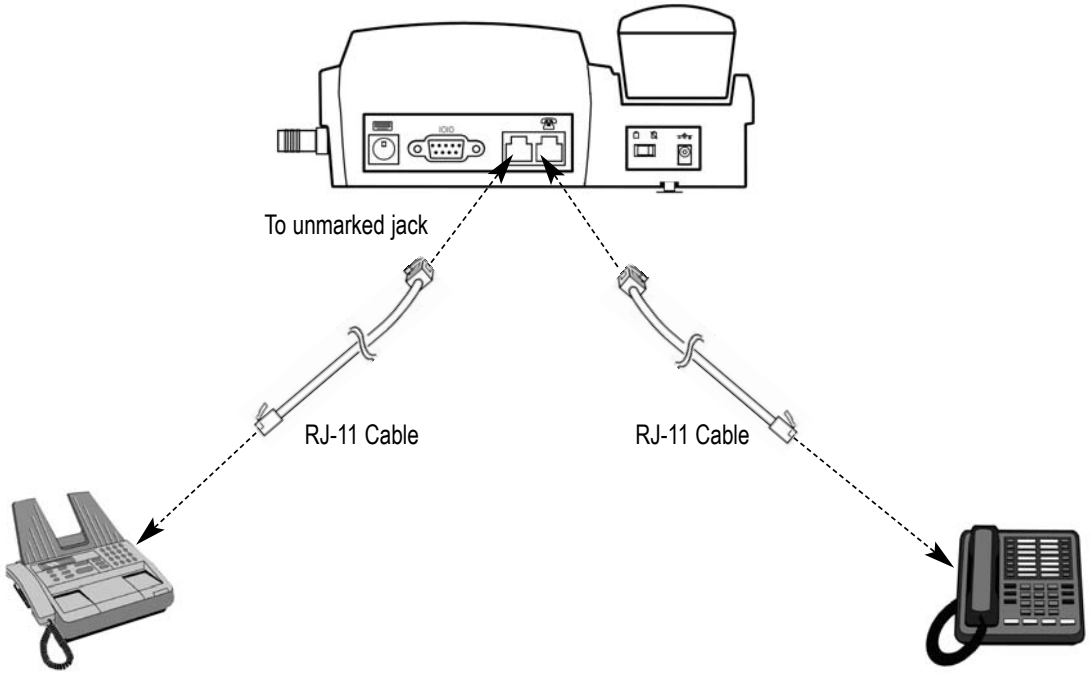


Figure 24 - Connect the SX5 for dual jack mode.

Single Jack Setup

This feature allows both the fax machine and extension phones to use the same RJ-11 jack on the SX5 (as in the case of combination fax/phones). Connect a fax machine to the phone jack on the SX5 that is marked with a telephone icon ***- see Figure 25***.

1. Press the **MENU** key.
2. Select *Settings*, then select *Fax Settings*.
3. Select *Analog Fax Jack.*
4. Select *Single Jack*.

Analog Fax Bypass

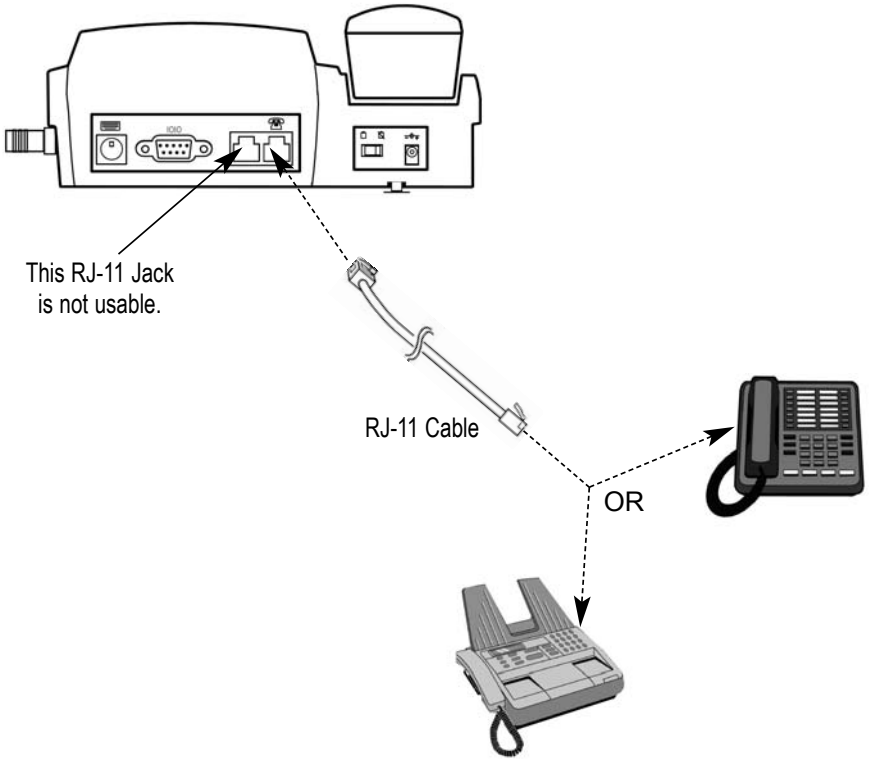


Figure 25 - Connect the SX5 for single jack mode.

In single jack mode, the SX5 default is for voice calls, so a fax by-pass string must be entered to send faxes. After a fax is sent, the SX5 will automatically reset itself for voice calls.

1. Lift up the handset (take off-hook).
2. Press: **# * 19 * 1 #**, then dial the fax number to be called.
3. Press START on the fax machine.

HINT: If the fax machine does not have a handset, enter **# * 19 * 1 #**, followed by the remote fax number to be called. Press START.

Routing Faxes to the Serial Port

(See Digital Fax Setup Instructions)

SX5 TROUBLESHOOTING

Telephone Service is Not Working (Cannot make or receive calls)

· Make sure the SX5 powered on properly.
· Make sure any equipment that is externally connected to the SX5 is correctly connected.
· Test any externally connected equipment on a known system to verify operation.
· Do you have the antenna connected? If not, connect the antenna.
· Is service established with a service provider? If so, is there any service provider issue. Your service may be disconnected or not functioning properly. Contact your service provider is you think this is the problem.

Unable to Receive Calls

· Is the handset on the cradle? If not, place the handset on the cradle and try again.
· Is the SX5 making a loud repetitive tone (ROH)? Then either speakerphone or the handset is off hook. Hang-up and try again.

Unable to Make Calls

· If you do not hear standard dial tone when off hook, then your service has a problem. Contact your service provider is you think this is the problem.
· Do you have telephone extensions connected to the SX5? If so, one of those may be off hook (the display will show this information).

Unable to Send or Receive Analog Fax Calls

· Is your fax machine connected properly? You may have the fax machine connected to the wrong RJ-11 jack of the SX5. Make sure it is connected to the jack with no symbol (no phone icon). If you want to use the SX5 in single jack mode, please refer to the fax section of this manual for proper setup.
· Do you have fax service on your wireless account? Contact your service provider for information.
· Do you have good signal strength? If you signal is low it may affect faxing. Try repositioning the unit or obtaining a direction high gain external antenna.

Unable to Send or Receive Circuit Switched Data (CSD) Calls

· Is your computer connected to the serial port of the SX5? If not, connect the computer with an appropriate RS232 DB-9 cable.
· Do you have CSD service on your wireless account? Contact your service provider for information.
· Is your computer configured properly to access data service with the SX5? Please reference the data sections of this manual for proper setup.

Unable to Connect to GPRS Service

· Is your computer connected to the serial port of the SX5? If not, connect the computer with an appropriate RS232 DB-9 cable.
· Do you have GPRS service on your account? Contact your service provider for information.
· Is your computer configured properly to access GPRS with the SX5? Please reference the data sections of this manual for proper setup or your GPRS setup wizard help file for more information.
· You cannot pass the dialing sequence of the connection. Make sure that DTE Fallback is disabled. See the data section of the manual for more information.
· You can dial the connection but cannot authenticate with the network. There may be a network or account setup problem. Contact your service provider for more information.

Moisture or Ventilation Problems

· Is moisture forming on or around the SX5? Remove any moisture with a clean dry towel and move the unit to a well ventilated area. Review the Temperature and Environment section of this manual for more information.

No Power

· Is the power supply connected to the unit? Make sure power is available and that the power supply is properly connected to the SX5.
· The power supply is connected but the unit still has no power. Make sure the circuit is functioning to the power supply. Check breakers & contact your power company. Power may be off at location.

CONFORMANCE STATEMENTS

The SX5 900/1800 MHz models are in conformance with the requirements of the applicable EU CE Council Directives.

The SX5 850/1900 Mhz models are in conformance with all applicable FCC requirements.

FCC Part 15 Class B Compliance

This Phonecell® SX5 model has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. Changes or modifications not expressly approved by Telular Corporation will void your authority to operate the equipment per FCC part 15 paragraph 15.21.These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the antenna.
- Increase the separation between the equipment and the terminal.
- Connect the equipment into an outlet on a circuit different from that to which the terminal is connected.
- Consult your Authorized Telular Distributor or an experienced radio/TV technician for help.

N12847

All SX5 900/1800 MHz models are in conformance with all applicable Australian government telecommunications requirements.

ME69

All SX5 900/1800 MHz models have hygienic conclusion of GOSSANEPIDNADZO and conform to GOSSTANDARD of Russia.

TA-2002/058 Approved

All SX5 900/1800 MHz models are in conformance with all applicable South African government telecommunications requirements.

SAFETY INFORMATION

The Phonecell® SX5 functions as both a radio transmitter and receiver. When it is ON, the SX5 receives and sends out radio frequency (RF) energy. The SX5 GSM 900/1800 unit operates in the frequency ranges of 890 MHz to 960 MHz and 1710 MHz to 1880 MHz. The SX5 1900 unit operates in the frequency range of 1850 MHz to 1990 MHz. Both units employ commonly used phase/frequency modulation techniques. When you use the SX5, the cellular system handling your call controls the power level at which the unit transmits.

Exposure to RF (Radio Frequency) Energy

In 1991, the Institute of Electrical and Electronics Engineers (IEEE), and in 1992, the American National Standards Institute (ANSI), updated the 1982 ANSI Standard for safety levels with respect to human exposure to RF energy. After reviewing the available body of research, more than 120 scientists, engineers and physicians from universities, government health agencies and industry developed this updated Standard. In March, 1993, the U.S. Federal Communications Commission (FCC) proposed the adoption of this updated Standard.

The design of your Telular Phonecell® SX5 complies with this updated Standard. Of course, if you want to limit RF exposure even further than the updated ANSI Standard, you may choose to control the duration of your calls and operate your phone in the most power-efficient manner.

Safe Operation Requirement

The Phonecell® SX5 must be either wall mounted or desk mounted and should not be operated when any person is within 203 mm (8 inches) of the antenna.

Temperature Environment

Operating Temperature: From -10°C to +50°C ; Up to 95% relative humidity (non-condensing).
Storage Temperature: From -40°C to +60°C; Up to 95% relative humidity (non-condensing).

Antenna Care and Replacement

Do not use the Phonecell® SX5 with a damaged antenna. If a damaged antenna comes into contact with the skin, a minor burn may result. Have your antenna replaced by a qualified technician immediately. Use only a manufacturer-approved antenna. Unauthorized antennas, modifications, or attachments could damage the Phonecell® SX5.

Driving

Check the laws and regulations on the use of cellular products in the areas where you drive. Some jurisdictions prohibit your using a cellular device while driving a vehicle. Even if your jurisdiction does not have such a law, we strongly suggest that, for safety reasons, the driver use extreme caution when operating the cellular device while the vehicle is in motion. Always obey the law.

Electronic Devices

Most modern electronic equipment is shielded from RF energy. However, RF energy from cellular devices may affect inadequately shielded electronic equipment.

RF energy may affect improperly installed or inadequately shielded electronic operating and entertainment systems in motor vehicles. Check with the manufacturer or its representative to determine if these systems are adequately shielded from external RF energy. You should also check with the manufacturer of any equipment that has been added to your vehicle.

Consult the manufacturer of any personal medical devices (such as pacemakers, hearing aids, etc.) to determine if they are adequately shielded from external RF energy.

Turn your Phonecell® SX5 OFF in health care facilities when any regulations posted in the areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Aircraft

Turn OFF your Phonecell® SX5 before boarding any aircraft.

- Use it on the ground only with crew permission.
- Do not use it in the air.

To prevent possible interference with aircraft systems, U.S. Federal Aviation Administration (FAA) regulations require you to have permission from a crew member to use your cellular phone (or any other cellular product) while the plane is on the ground. To prevent interference with aircraft systems, FCC regulations prohibit using your cellular device while the plane is in the air.

Children

Do not allow children to play with your Phonecell® SX5 to prevent damage to the unit.

Blasting Areas

Construction crews often use remote control RF devices to set off explosives. Therefore, to avoid interfering with blasting operations, turn your Phonecell® SX5 OFF when in a "blasting area" or in areas posted: "Turn off two-way radio."

Potentially Explosive Atmospheres

Turn your Phonecell® SX5 OFF when in any area with a potentially explosive atmosphere. It is rare, but your Phonecell® SX5 or its accessories could generate sparks. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often, but not always, clearly marked. They include fueling areas such as gas stations; below deck on boats; fuel or chemical transfer or storage facilities; areas where the air contains chemicals or particles, such as grain, dust, or metal powders; and any other area where you would normally be advised to turn off your vehicle engine.

Do not transport or store flammable gas, liquid or explosives in the area of your Phonecell® SX5 or accessories.

Vehicles using liquefied petroleum gas (such as propane or butane) must comply with the National Fire Protection Standard (FPA-58). For a copy of this standard, contact the National Fire Protection Association, One Batterymarch Park, Quincy, MA 02269, Attn: Publications Sales Division.

WARRANTY

I. WHAT THIS WARRANTY COVERS AND FOR HOW LONG:

TELULAR CORPORATION ('Telular") warrants to a distributor Buyer, or to a customer only if the customer is a Buyer directly from Telular, that the Products (including accessories) shall comply with the applicable Specifications and shall be free from defects in material and workmanship under normal use and service for a period of fifteen (15) months from date of shipment from Telular. Telular, at its option, shall at no charge either repair, replace or refund the purchase price of the Product during the warranty period, provided it is returned by Buyer in accordance with the terms of this warranty to the Telular designated repair center. Repair or replacement, at Telular's option, may include the replacement of parts, boards or Products with functionally equivalent reconditioned items. Repaired and replacement items are warranted for the balance of the original warranty period. All replaced items shall become the property of Telular. **SUCH ACTION ON THE PART OF TELULAR SHALL BE THE FULL EXTENT OF TELULAR'S LIABILITY HEREUNDER, AND BUYERS EXCLUSIVE REMEDY**. Buyer shall be responsible for all costs and expenses incurred by Buyer including without limitation any handling, labor or transportation charges. **OTHER THAN AFORESAID, THIS EXPRESS WARRANTY IS EXTENDED BY TELULAR TO BUYER ONLY AND NOT TO BUYER'S CUSTOMERS OR USERS OF BUYER'S PRODUCTS**.

II. HOW TO OBTAIN WARRANTY SERVICE

Product covered under this warranty shall only be accepted from and returned to Buyer's designated repair center. Buyer's dealers, distributors, agents, and end users cannot submit items to Telular under this warranty. To receive warranty service an RMA number must first be obtained from Telular Technical Support. The defective or non-compliant Product should be sent by Buyer freight pre-paid to: Telular Corporation, 647 North Lakeview Parkway, Vernon Hills, IL 60061, USA or other designated location. The product must be packaged in the original carton and packing material or an equivalent package and must have the assigned RMA number clearly marked on the carton. Returned Product received without an RMA number will be returned to the sender.

III. WARRANTY CONDITIONS:

This is the complete warranty for the Products manufactured by Telular and sold to Buyer. Telular assumes no obligation or liability for additions or modifications to this warranty unless made in writing and signed by an officer of Telular. Unless made in separate written agreement between Telular and Buyer, Telular does not warrant the installation, field maintenance or service of the Products or parts.

TELULAR CANNOT BE RESPONSIBLE IN ANY WAY FOR ANY ANCILLARY EQUIPMENT NOT FURNISHED BY TELULAR WHICH IS ATTACHED TO OR USED IN CONNECTION WITH THE PRODUCTS OR FOR OPERATION OF THE PRODUCTS WITH ANY ANCILLARY EQUIPMENT AND ALL SUCH EQUIPMENT IS EXPRESSLY EXCLUDED FROM THIS WARRANTY. FURTHERMORE, TELULAR CANNOT BE RESPONSIBLE FOR ANY DAMAGE TO THE PRODUCTS RESULTING FROM THE USE OF ANCILLARY EQUIPMENT NOT FURNISHED BY TELULAR FOR USE WITH THE PRODUCTS.

WHEN THE PRODUCT IS USED IN CONJUNCTION WITH ANCILLARY OR PERIPHERAL EQUIPMENT NOT MANUFACTURED BY TELULAR, TELULAR DOES NOT WARRANT THE OPERATION OF THE PRODUCT/PERIPHERAL COMBINATION, AND TELULAR SHALL HONOR NO WARRANTY CLAIM WHERE THE PRODUCT IS USED IN SUCH A COMBINATION AND IT IS DETERMINED BY TELULAR THAT THERE IS NO FAULT WITH THE PRODUCT. TELULAR DISCLAIMS LIABILITY FOR RANGE, COVERAGE, AVAILABILITY, OR OPERATION OF THE CELLULAR SYSTEM WHICH IS PROVIDED BY THE CARRIER.

IV. WHAT THIS WARRANTY DOES NOT COVER:

(a) Subsequent upgrades and enhancements to the Product. (b) Defects, non-compliance or damage resulting from use of the Product in other than its normal and customary manner or environment. (c) Defects, noncompliance or damage from misuse, lightening, accident or neglect. (d) Defects, noncompliance or damage from improper testing, operation, maintenance, installation, adjustment, or any alteration or modification of any kind. (e) Product disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection and testing to verify any warranty claim. (f) Product which has had the serial number removed or made illegible. (g) Defects, non-compliance or damage due to spills of food or liquid. (h) All plastic surfaces and all other externally exposed parts that are scratched or damaged due to customer normal use. (i) Costs and expenses, including without limitation handling, labor and transportation, incurred in returning Product for warranty service to Telular's Repair Center. (j) Repair, programming or servicing by someone other than Telular.

V. GENERAL PROVISIONS:

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APPENDIX A
PC SERIAL PORT SETUP FOR CIRCUIT SWITCHED DIGITAL FAX AND DATA (not for use with GPRS)

Requirements:

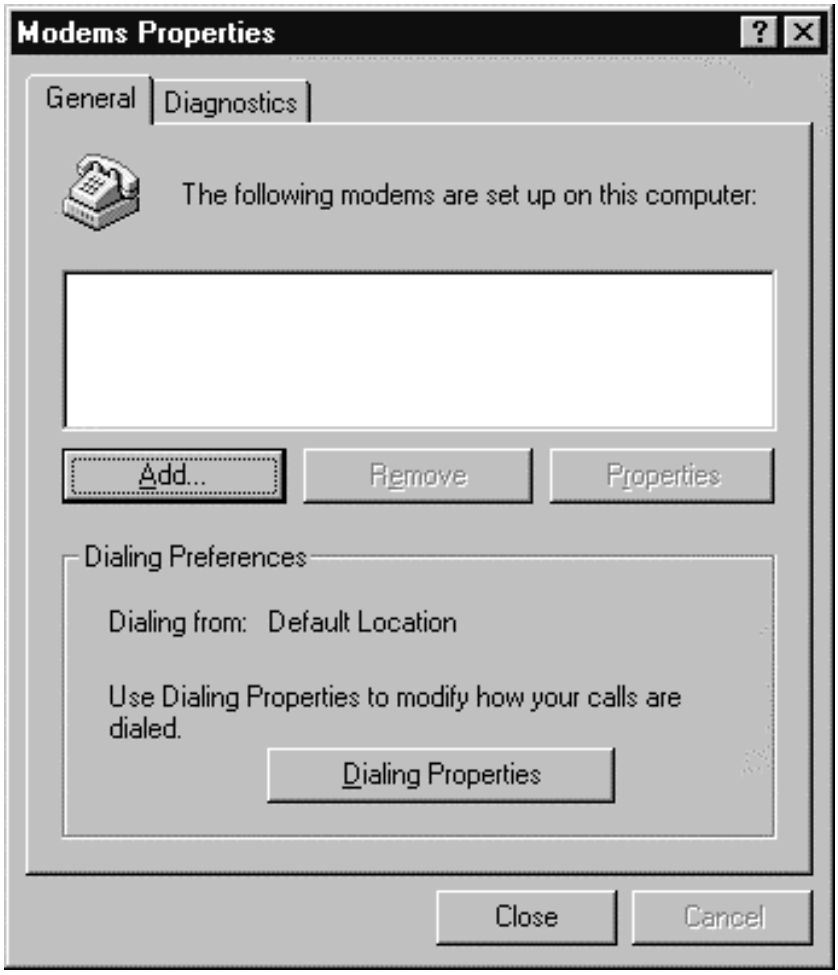
- **GSM account with your network service provider including a circuit switched data and fax facility.**
- **PC, laptop, notebook with a RS232 serial port.**
- **Windows 98 or better.**
- **RS-232 Cable (DB9 to DB15).**

NOTE: When all of the above have been satisfied, you may proceed.

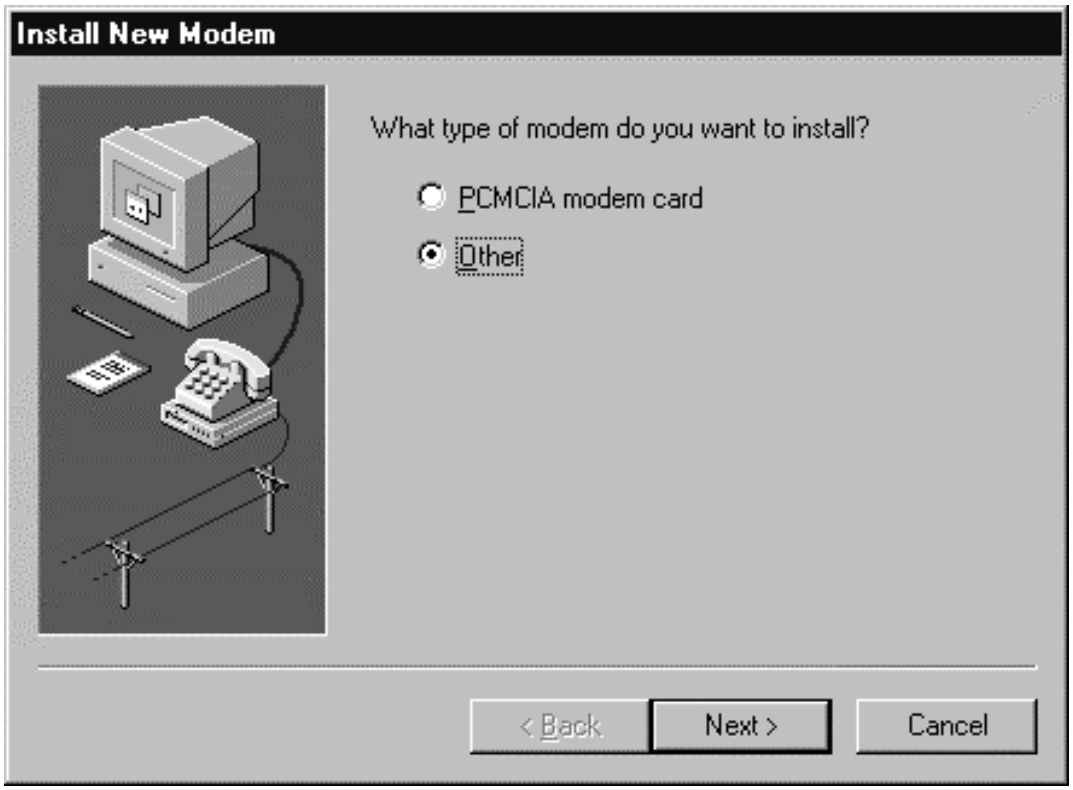
Modem Setup

1. Power on your PC or device that is connected to the SX5.
2. Click the “Start” button, select "SETTINGS" and then "CONTROL PANEL". Once the Control Panel window appears double click the MODEMS icon button. The modem properties window will appear.

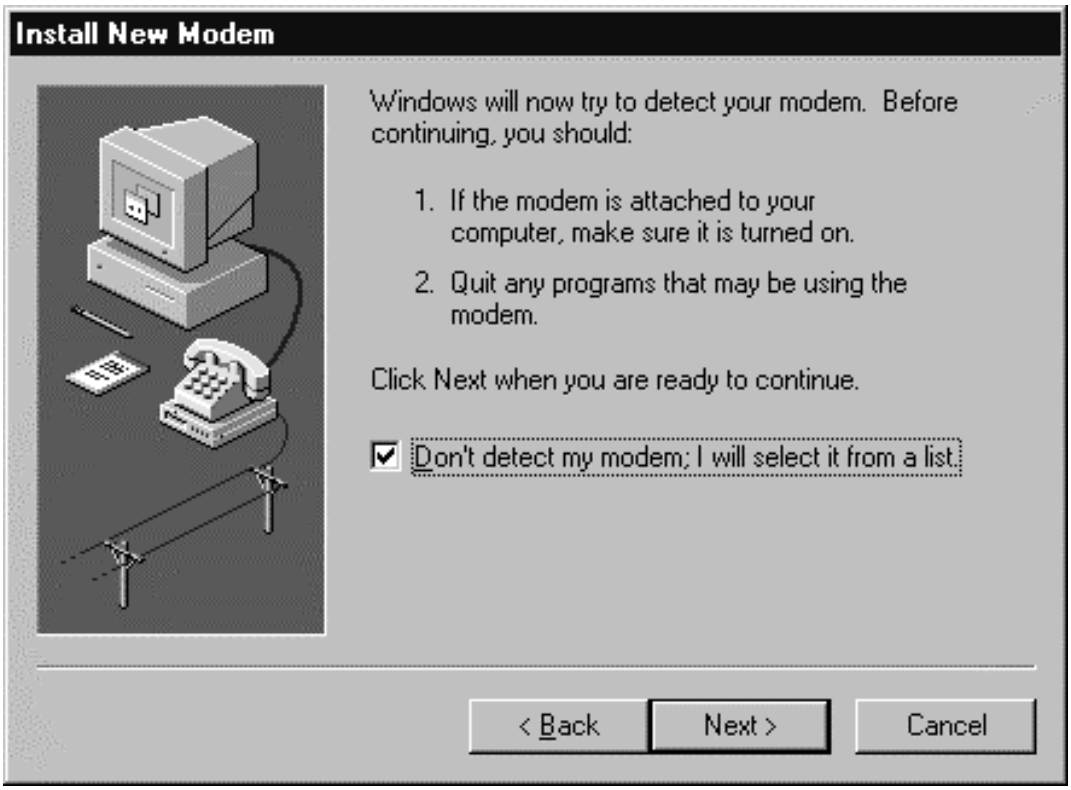
   NOTE: Other modems may appear in the list of installed modems.
3. Click the ADD button to install a new modem device for the phonecell.



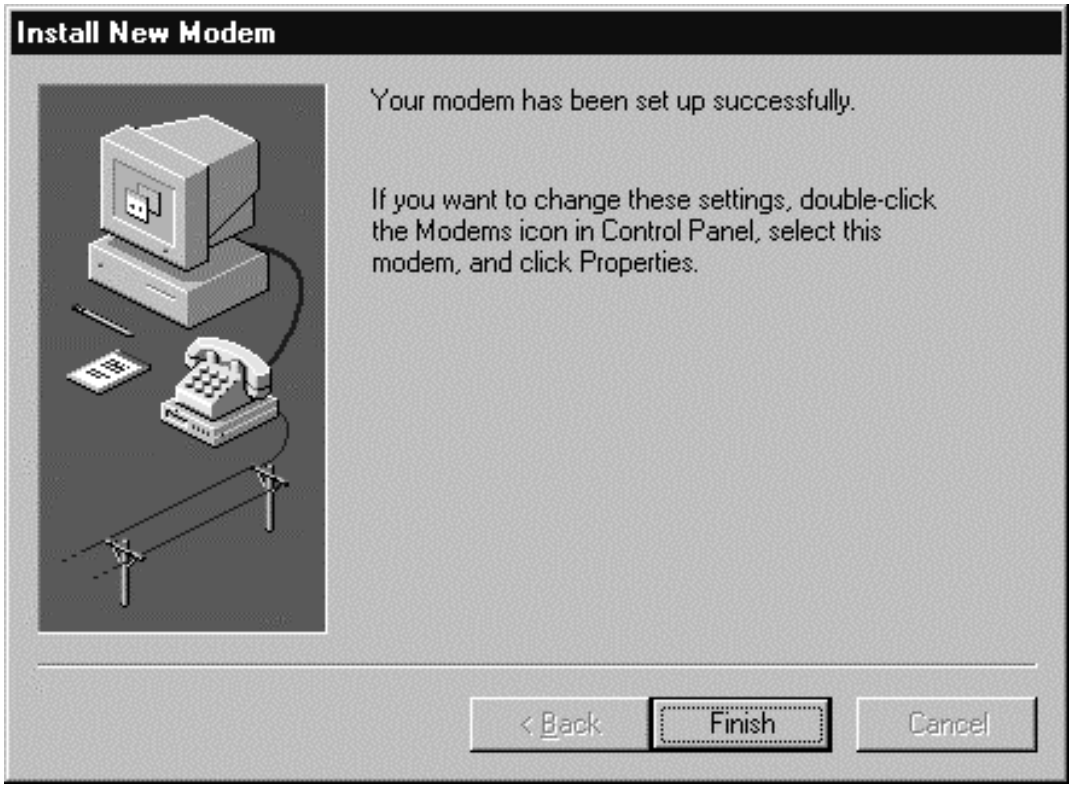
4. The Install New Modem window may appear asking for the type of modem to install. Select "Other" followed by clicking the NEXT button. If this window does not appear, go to Step 5.



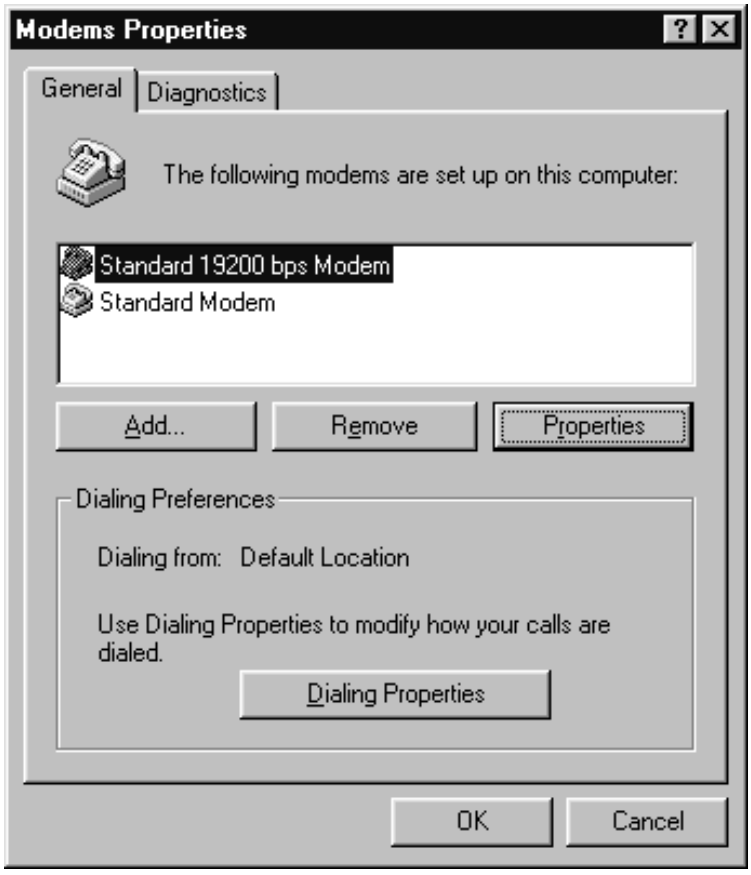
5. The Install New Modem window will appear. Then, click on the "Don't detect my modem option" followed by clicking the NEXT button.


Install New Modem
Windows will now try to detect your modem. Before continuing, you should:
1. If the modem is attached to your computer, make sure it is turned on.
2. Quit any programs that may be using the modem.
Click Next when you are ready to continue.
Don't detect my modem; I will select it from a list.
< Back
Next >
Cancel

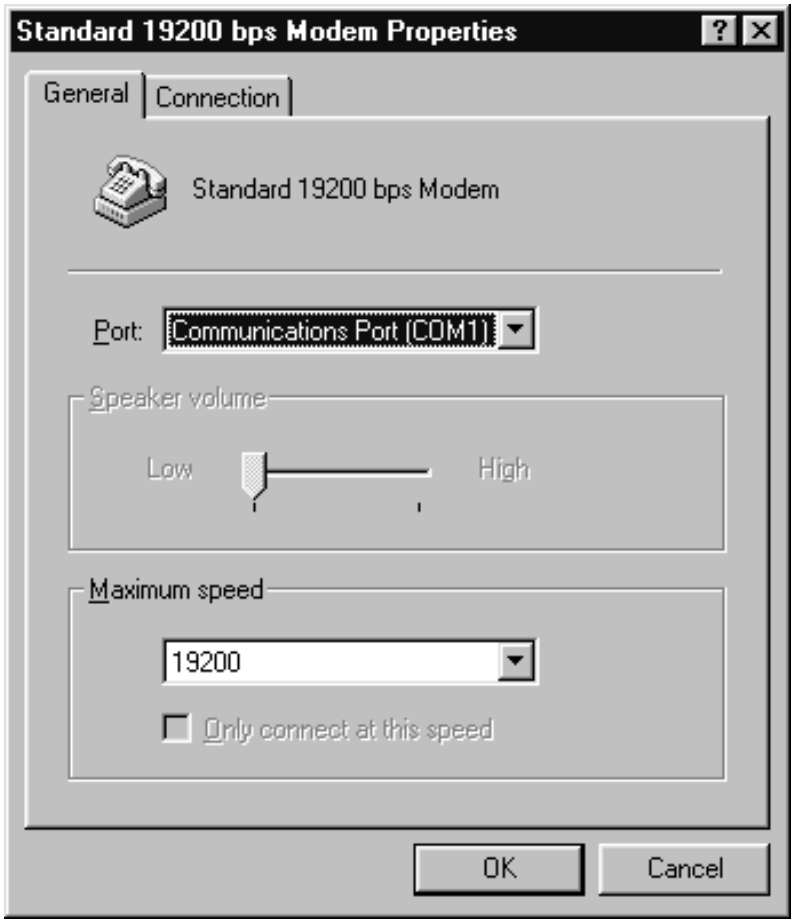
6. The Install New Modem will update again to select the manufacture an dthe modem model.Select “Standard Modem Types” from the Manufactures list. Select “Standard 19200 bps Modem” from the Models list then click next.


Install New Modem
Your modem has been set up successfully.
If you want to change these settings, double-click the Modems icon in Control Panel, select this modem, and click Properties.
< Back
Finish
Cancel

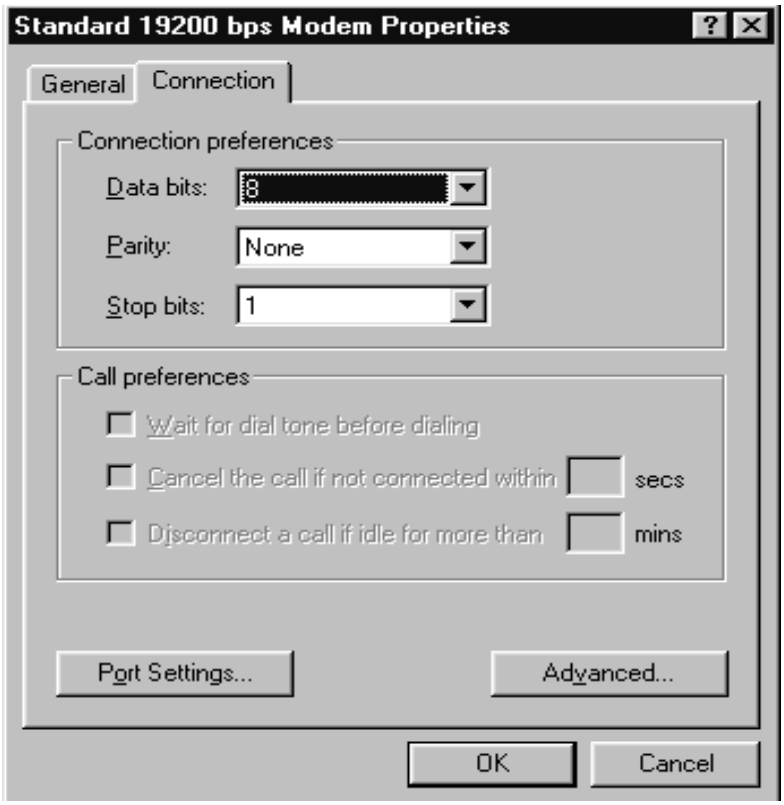
7. The Install New Modem will update to select the COM port. Select the COM port that will be connected to the SX5 then click Next. Windows will now create a modem configuration file for the Phonecell ® SX5. This may take several minutes.



8. The Modems Properties window should appear. Click on the Properties button.
9. The Standard 19200 bps Modem Properties window will open in the General tab. Set as shown with the COM port you have selected.



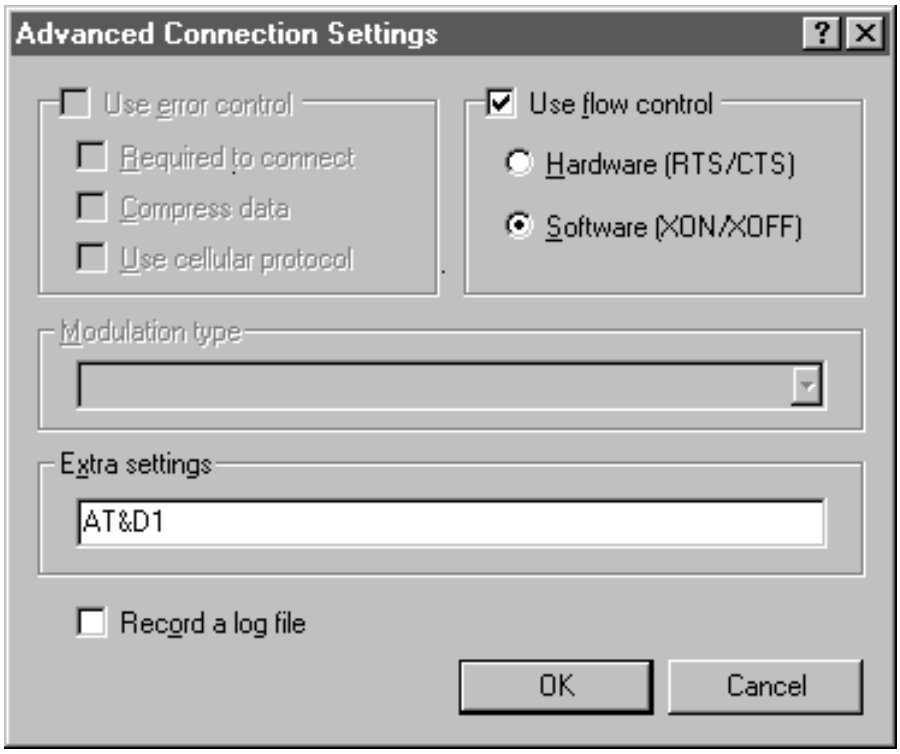
10. Then click on the Connection tab. Set as shown below.



11. Click on the Advanced button. Set as shown.
12. Click on OK and Close to back out of each window. Your modem is now set up.

NOTE: When using the SX5 for PC fax operation, make sure the modem connection uses software flow control. When using PC data, either hardware or software flow control can be used, as long as the PC application (and modem) match the SX5's configuration. The SX5 defaults to hardware flow control. The following AT commands are used to change the SX5's flow control.

Enable Software Flow Control:	AT+IFC=1,1
Enable Hardware Flow Control:	AT+IFC=2,2
Disable Flow Control:	AT+IFC=0,0



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